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RADAR SIGNATURE MEASUREMENTS OF BQM-34A AND BQM-34F TARGET DRONES VOLUME IA

Test Group (6585th)

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13 ABSTRACT

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This report is published in three parts, each of which presents data acquired from both BQM-34 vehicles. Part a is limited to monostatic radar cross section and glint data. Part b presents radar cross section data acquired at bistatic angles of 10 and 20 degrees. Radar cross section and glint data acquired at a bistatic angle of 30 degrees are contained in Part c.

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BQM-34F						

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THE RADAR TARGET SCATTER DIVISION (RAT SCAT)
6585th Test Group

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FOREWORD

This Air Force report is based on actual radar cross section measurements made at the Radar Target Scatter Division (RAT SCAT) of the 6585th Test Group. RAT SCAT is located on the Alkali Flats, Holloman Air Force Base, New Mexico. This Facility is operated and maintained by Dynalectron Corporation, Land-Air Division under AF Contract F29601-73-C-0133, and is under the specific direction of the 6585th Test Group. The AF Project Officer is Lt Colonel Carroll R. Griffin.

Correspondence pertaining to this report should be addressed to the attention of the 6585th Test Group (RX).

This technical report has been reviewed and is approved.

Carroll R. Griffin

CARROLL R. GRIFFIN, Lt Colonel, USAF
Chief, Radar Target Scatter Division

ABSTRACT

Radar signature data were acquired from BQM-34A and BQM-34F remotely piloted vehicles at the U.S. Air Force Special Weapon Center's Radar Target Scatter Division (RAT SCAT), 6585th Test Group, Holloman AFB, New Mexico. Monostatic measurements of the components of the target scattering matrix, monostatic and 30 degree bistatic measurements of target glint, as well as 10 and 20 degree bistatic measurements of target cross section were performed using vertical and horizontal antenna polarizations. Data were obtained from both the principal and crossed polarized components of the target return. Sixteen orientations of each vehicle were measured at a frequency of 5500 MHz.

This report is published in three parts, each of which presents data acquired from both BQM-34 vehicles. Part a is limited to monostatic radar cross section and glint data. Part b presents radar cross section data acquired at bistatic angles of 10 and 20 degrees. Radar cross section and glint data acquired at a bistatic angle of 30 degrees are contained in Part c.

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INTRODUCTION

This report documents radar cross section, phase and glint measurements of BQM-34A and BQM-34F target drones performed at the U. S. Air Force Radar Target Scatter Division (RAT SCAT), 6585th Test Group, Holloman Air Force Base, New Mexico. Monostatic, 10 degree bistatic, 20 degree bistatic, and 30 degree bistatic radar cross section data were acquired at a frequency of 5500 MHz using horizontal, vertical, and cross polarization. Monostatic and 30 degree bistatic target glint data were acquired concurrently with the cross section measurements. Phase data were obtained at the three measurement system polarizations for the monostatic case only.

Measurements were performed at vehicle roll angles of 0, 30, 60 and 90 degrees at vehicle pitch angles of 0, 10, 20 and 30 degrees providing a total of sixteen orientations for each target vehicle. Measurements of the BQM-34F target were performed with the vehicle in an inverted position. Consequently, all aspect referenced data for that target are the mirror images of those which would have been obtained had the vehicle not been inverted. Measurements of the BQM-34A target were performed with the target in the normal, non-inverted position.

This report is published in three parts, each of which contains data acquired from both the BQM-34A and BQM-34F vehicles. Monostatic data are presented in Part a, ten and twenty degree bistatic data are presented in Part b and thirty degree bistatic data are presented in Part c.

A description of the measurement conditions as well as reproductions of the data acquired are presented in Section II of this document. The target drone measurement programs were requested by the U.S. Army Missile Command (AMSMI-RER), Redstone Arsenal, Alabama.

SECTION II
TEST CONDITIONS AND RESULTS

The BQM-34A and BQM-34F remotely piloted target drones are manufactured by the Teledyne Ryan Aeronautical Company, San Diego, California and are designed for subsonic and supersonic flight capabilities respectively. The BQM-34A vehicle, tail number 8356, was furnished by the Target Drone Division, 6585th Test Group at Holloman Air Force Base. The BQM-34F vehicle, tail number 07770, was shipped to RAT SCAT from the Ryan facility and assembled on site under the manufacturers cognizance. Both vehicles were measured in the clean configuration without accessory wing tip pods or external fuel tanks. The forward fiberglass cowling of the BQM-34A vehicle was painted to provide a conductive metallic finish and RAM was installed in the forward bulkhead area, behind the nose radome. The BQM-34F target drone has an approximate length of 29 feet with a wingspan of 9.7 feet. Approximate length and wingspan of the BQM-34A target drone are 22 feet and 13 feet respectively. Figures 1A and 1B show the BQM-34A and BQM-34F vehicles mounted for data acquisition at the RAT SCAT facility. Figures 2A and 2B illustrate the modifications to the BQM-34A.

The zero degree pitch, zero degree roll reference for both targets was defined as being the wings level, longitudinal water line horizontal, vehicle orientation. Positive pitch angles reflect a nose up flight attitude and postive roll angles are equivalent to clockwise rotation when viewed from aft of the vehicle. Due to the inverted mounting of the BQM-34F target, aspect angle annotations for that vehicle deviate from the normal RAT SCAT standards. The left beam-on aspect corresponds to an angle of 90 degrees and the right beam-on aspect corresponds to an angle of 270 degrees. Angular annotations for the left beam-on and right beam-on aspects of the BQM-34A target remain 270 and 90 degrees respectively. Annotations of 0 and 180 degrees correspond to the nose-on and tail-on aspects of both vehicles. Target rotation was in the clockwise sense with data origin at 180 degrees of target aspect.

The test vehicles were mounted on two styrofoam columns to provide an approximate fourteen foot target height at the vicinity of the vehicle C. G. The measurement system antenna heights were selected in accordance with ground plane range geometry to minimize RF field intensity taper in the vertical plane. A measurement range of 2458 feet was used. The 5500 MHz measurement system was operated at a nominal output power level of 1 KW at a PRF of 1 KHz. The transmitted pulse width was on the order of 0.2 microseconds and the range gate width used was 0.1 microseconds. The radar cross section measurement system was calibrated using the broadside specular value of a 5.5 inch diameter, 18 inch long cylinder. Bistatic calibrations were effected by scaling of the specular value in proportion to the cosine of the bistatic half angle.

Glint characteristics of the BQM-34A and BQM-34F vehicles were measured using a pair of three foot diameter parabolic antennas on a horizontal baseline of 44.6 inches. The resulting angular aperture was equivalent to 1.5 milliradians or 0.087 degrees. Baseline phase difference data were acquired using constant-phase limiting amplifiers in conjunction with a phase tracking servo system at the 60 MHz intermediate frequency. The one wavelength of phase difference system ambiguity was equivalent to a cross range aperture in the target zone of 118.4 feet at the measurement frequency and target range used. The corresponding angular deviation from the boresight axis was ± 24 milliradians. The boresight axis reference calibration for glint data acquisition employed a 26.6 inch diameter precision sphere located at the center of target rotation.

Target relative phase data were obtained from the phase difference between the received signal from the inboard baseline antenna and the 60 MHz measurement system reference frequency. The local oscillator was phase locked with the system reference to eliminate the phase noise resulting from non-coherent RF to IF translation. Examples of phase data acquired from the BQM-34F target drone are presented in rectilinear plot format in Figures 3 and 4. The ordinates are anotated in terms of degrees of phase for modulo 2π and for modulo 40π analog data respectively. The abscissas are annotated in degrees of target aspect in both cases. Phase system stability, as indicated by the modulo 2π data, was on the order of 10 degrees. The modulo 40π data indicate the presence of multiple ambiguities in the modulo 2π data even at the minimum RAT SCAT target rotation rate of.025 rpm. Phase data acquired from the target vehicles were recorded on digital magnetic tape at target aspect intervals of 0.01 degree and are representative of the modulo 2π output of the phase tracking servo system. The phase data were referenced to a value of 180 degrees at the tail-on aspect of the target vehicles.

Cumulative probability of frontal cross section and mean frontal cross section were computed from the monostatic data acquired at the 0 degree pitch, 0 degree roll orientations of the BQM-34A and BQM-34F vehicles. The data are based on the 30 degree interval about the nose-on aspect and presented in Figures 5 through 10. Mean cross section data were computed over 1 degree aspect intervals at 0.1 degree increments.

Monostatic and bistatic median cross section as a function of target aspect are presented in Figures 11 through 18 for the 0 degree, 10 degree, 20 degree and 30 degree bistatic angles respectively. The median values were computed over 10 degree aspect intervals at 1 degree increments and based on data acquired from the 0 degree roll, 0 degree pitch orientations of both target vehicles.

Figures 19 through 24 present glint data in the form of probability density and cumulative probability distributions computed for the BQM-34A and BQM-34F vehicles over the 30 degree frontal aspect zone. The abscissas of the probability density and cumulative probability curves are annotated in terms of the apparent cross range displacement, in feet, either left or right of the center of target rotation; the ordinates are annotated in percent and percentile respectively. Both curves represent estimations of the appropriate continuous functions based on the phase difference data acquired within the specified aspect zone.

The density distribution functions indicate the probability of a given offset, or angular tracking error, occuring within the data base aspect zone. The cumulative probability functions are the integrals of the corresponding probability density functions and indicate the probability of the error due to target glint being less than or equal to a specified value. The probability of the glint error occurring between any two specified limits can be estimated by differencing the cumulative probability percentiles at the limit points.

The data of Figure 25 indicate the median measurement background levels obtained during monostatic data acquisition as a function of target aspect. The measurement backgrounds are typical of those observed throughout the measurement program. Median values were computed for 10 degree aspect intervals at 1 degree aspect increments.

The rectilinear signature data plots included in this report represent the radar cross section and glint characteristics of the BQM-34A and BQM-34F vehicles as a function of target aspect. Glint data is plotted with respect to degrees of relative phase difference with the center of target rotation, or boresight axis, equivalent to 180 degrees. The apparent linear cross range displacement and angular boresight deviation scale factors are approximately 3.0 degrees per foot and 0.33 milliradians per degree respectively. Table I is a data plot index which correlates data run number to target vehicle, antenna polarization, vehicle orientation, and bistatic angle. The monostatic and 30 degree bistatic cross section data are annotated with an A after the run number; the corresponding glint data are annotated with a G. Rectilinear plot format phase data were deemed to have minimal analytical value at the phase rates observed and consequently were deleted as a data item.

All data acquired from measurements of the BQM-34A and BQM-34F vehicles are available on BCD card image digital magnetic tape. Monostatic data are recorded in RAT SCAT Format 3 at aspect increments of 0.01 degrees and represent the RCS amplitude and target glint (degrees of phase difference) or RCS amplitude and target relative phase (degrees) as applicable. Measurements of radar cross section amplitude at bistatic

angles of 10 and 20 degrees are recorded in Format L at aspect increments of 0.1 degree. The 30 degree bistatic data representative of RCS amplitude and target glint are also recorded at aspect increments of 0.1 degree but in Format N. A description of the formats used in conjunction with RAT SCAT digital magnetic tapes is provided in Appendix C. An index of the available digital data is provided in Appendix D.

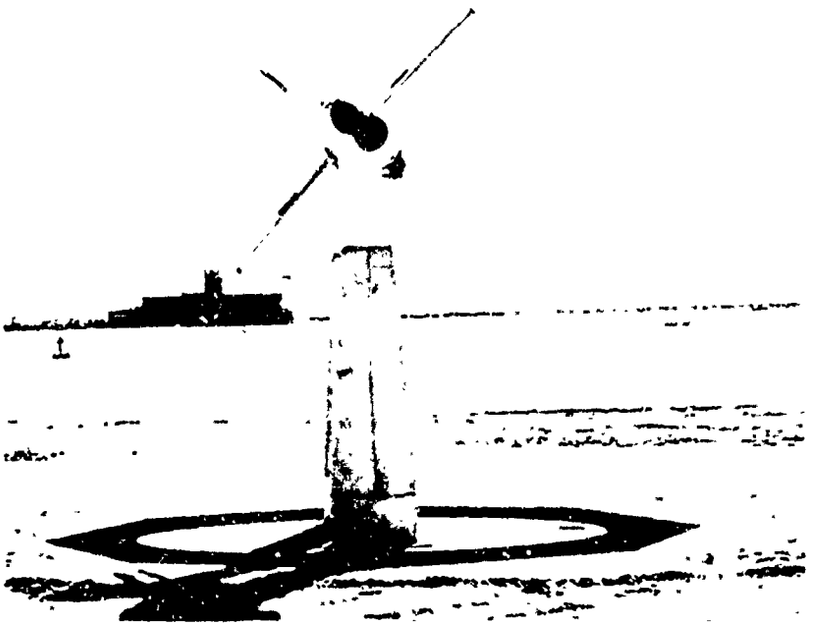


Figure 1A. BQM-34A Target Drone

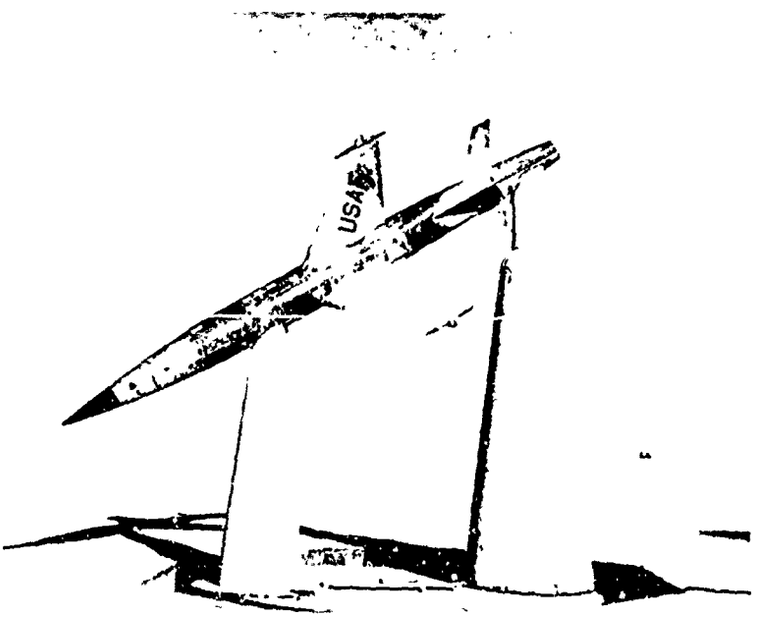


Figure 1B. BQM-34F Target Drone

Figure 2A. Area of Conductive Finish Application. BQM-34A

Figure 2B. AN-75 Absorber Location, BQM-34A

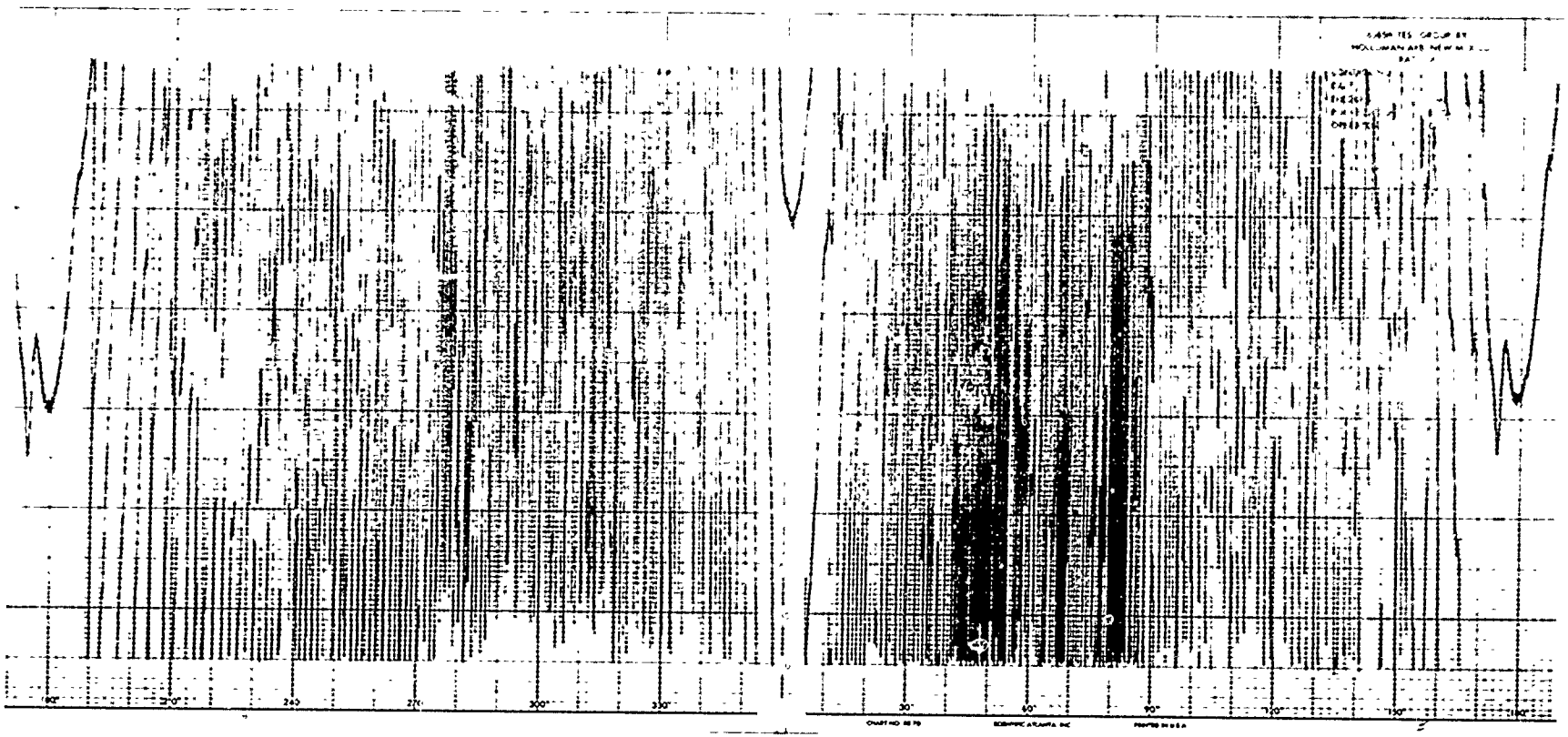


Figure 3. Modulo 2π Relative Phase, VV Polarization, 5500 MHz
BQM-34F Target Drone, 0° Roll, 0° Pitch

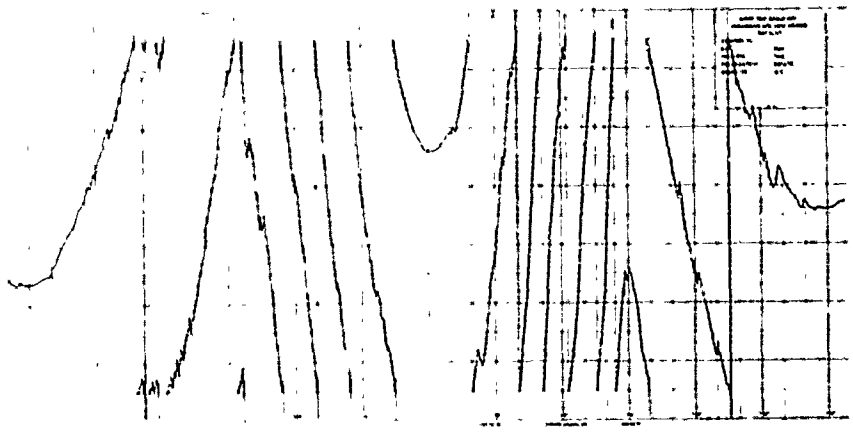


Figure 4a. Modulo 40π Relative Phase, VV Polarization, 5500 MHz BQM-34F Target Drone, 0° Roll, 0° Pitch

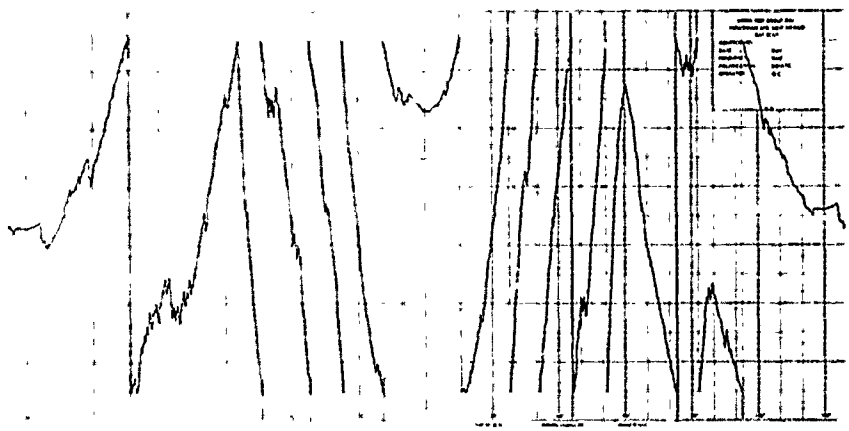


Figure 4b. Modulo 40π Relative Phase, HH Polarization, 5500 MHz BQM-34F Target Drone, 0° Roll, 0° Pitch

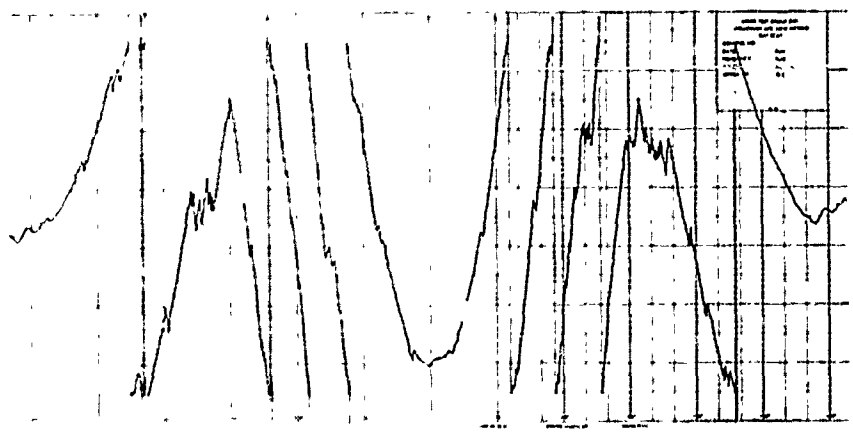


Figure 4c. Modulo 40π Relative Phase, VH Polarization, 5500 MHz BQM-34F Target Drone, 0° Roll, 0° Pitch

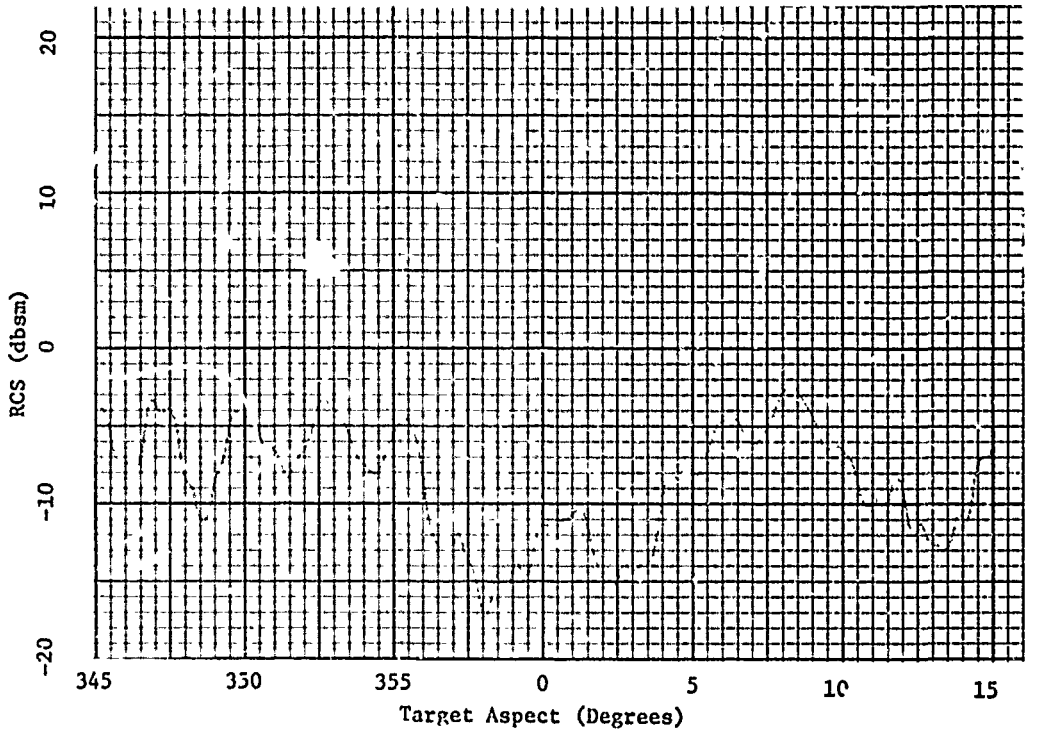


Figure 5A. Mean Frontal Cross Section
BQM-34A. VV Polarization

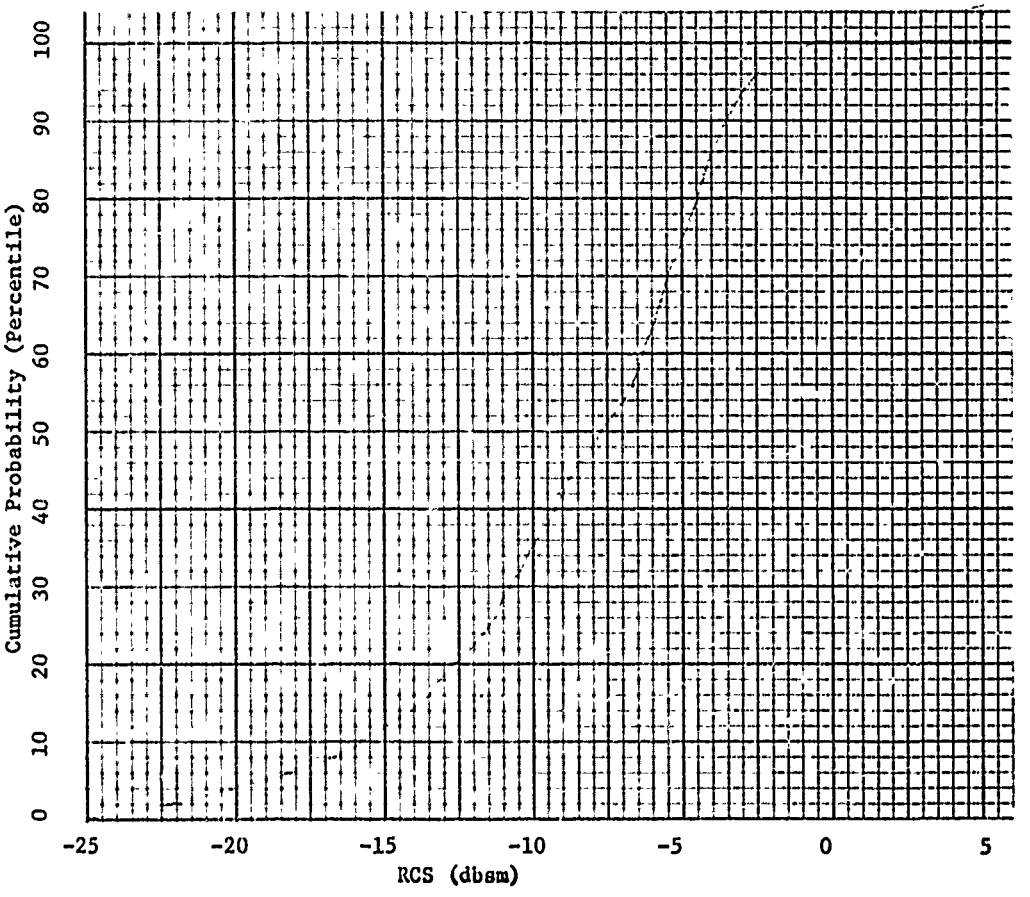


Figure 5B. Cumulative Probability of Frontal Cross Section
BQM-34A, VV Polarization

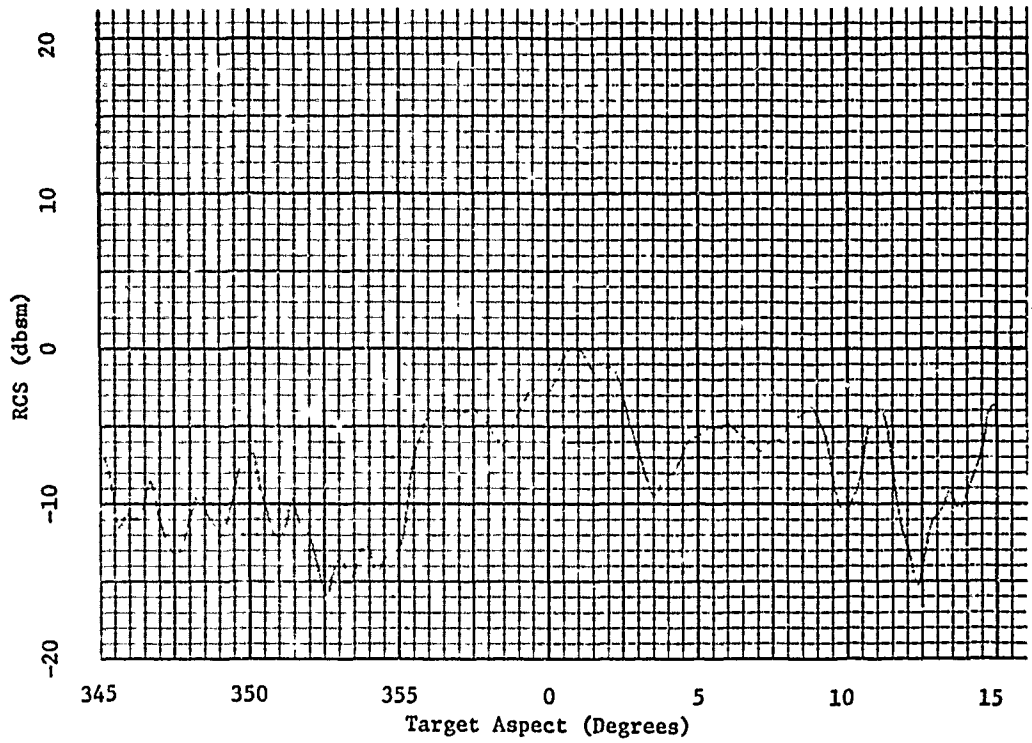


Figure 6A. Mean Frontal Cross Section
BQM-34A, HH Polarization

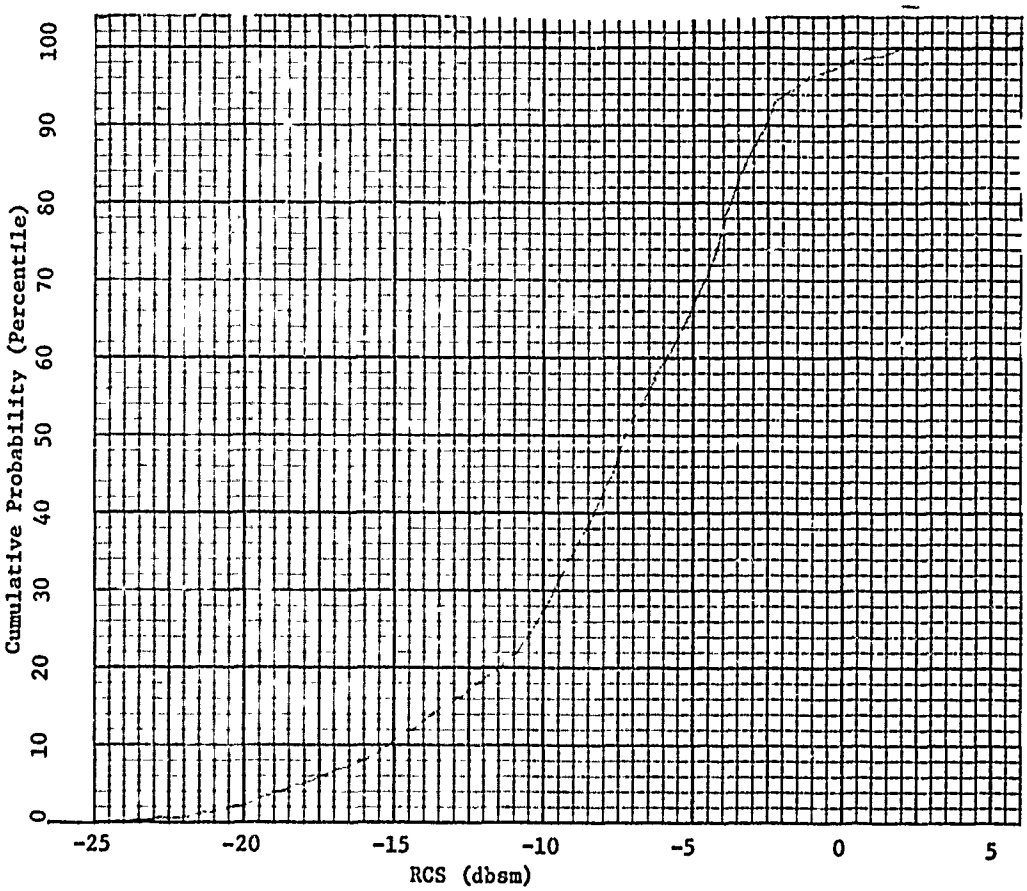


Figure 6B. Cumulative Probability of Frontal Cross Section
BQM-34A, HH Polarization

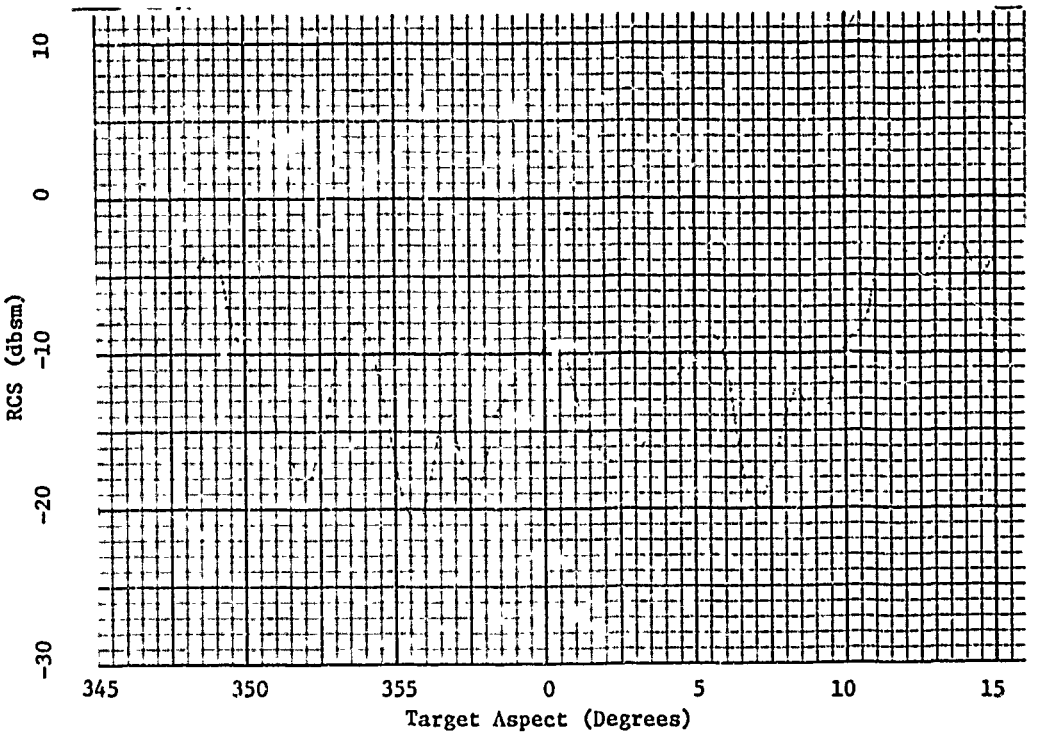


Figure 7A. Mean Frontal Cross Section
BQM-34A, VH Polarization

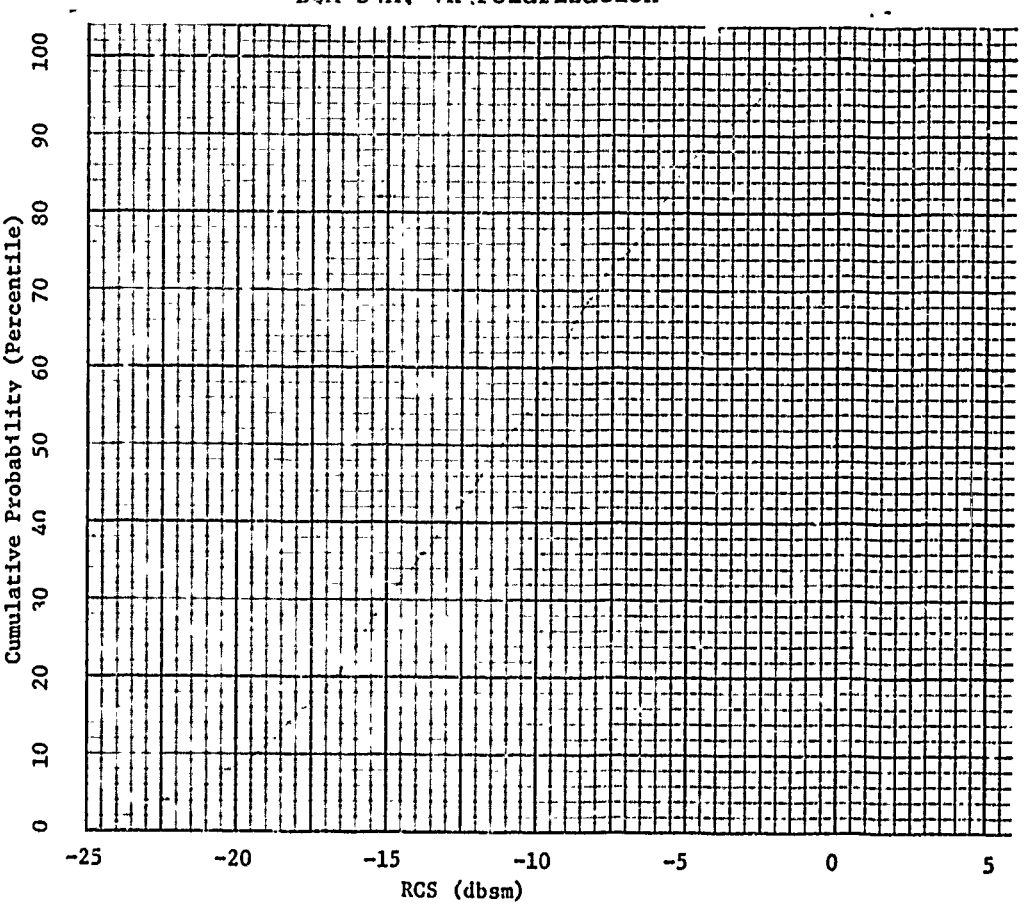


Figure 7B. Cumulative Probability of Frontal Cross Section
BQM-34A, VH Polarization

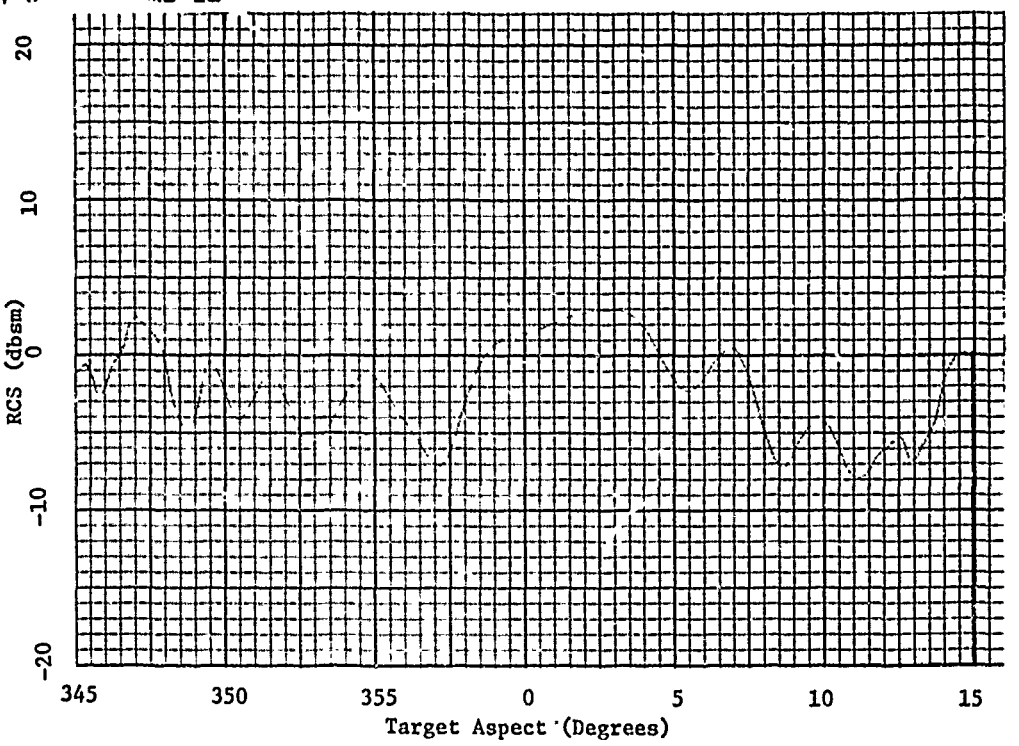


Figure 8A. Mean Frontal Cross Section
BQM-34F, VV Polarization

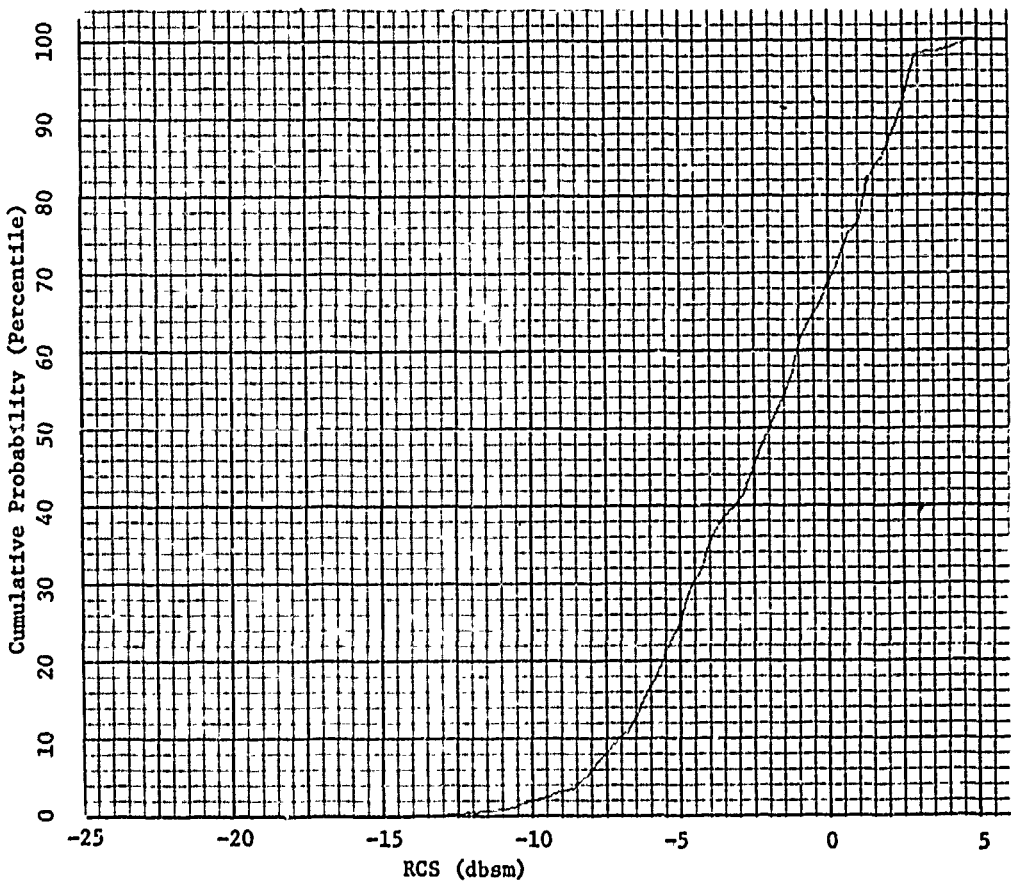


Figure 8B. Cumulative Probability of Frontal Cross Section
BQM-34F, VV Polarization

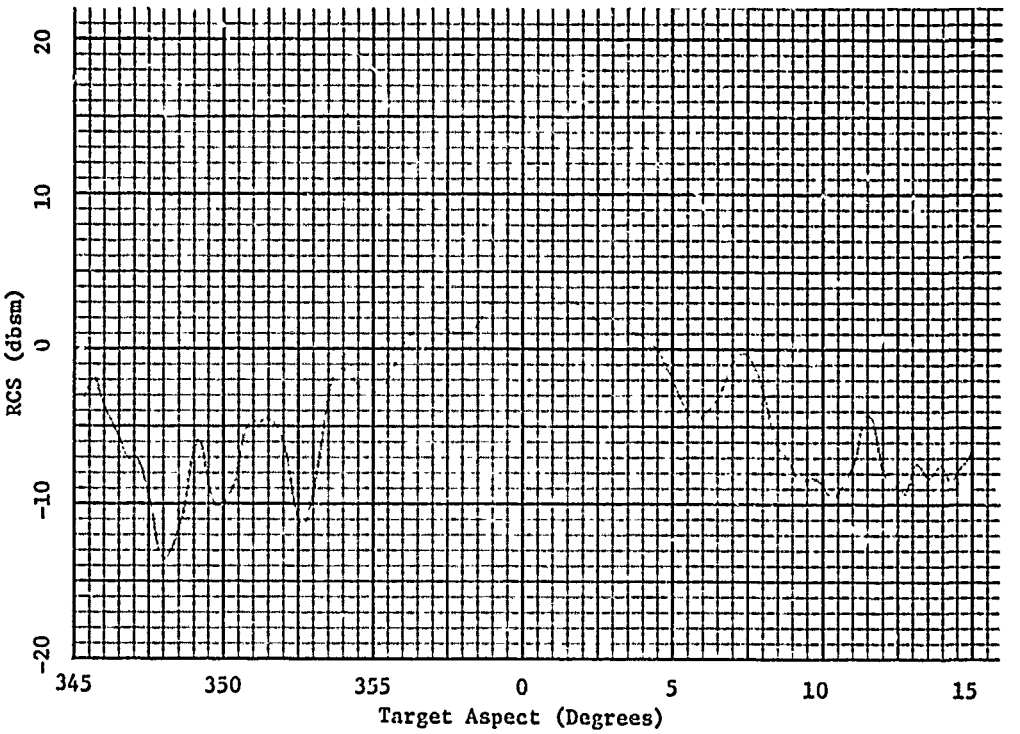


Figure 9A. Mean Frontal Cross Section
BQM-34F, HH Polarization

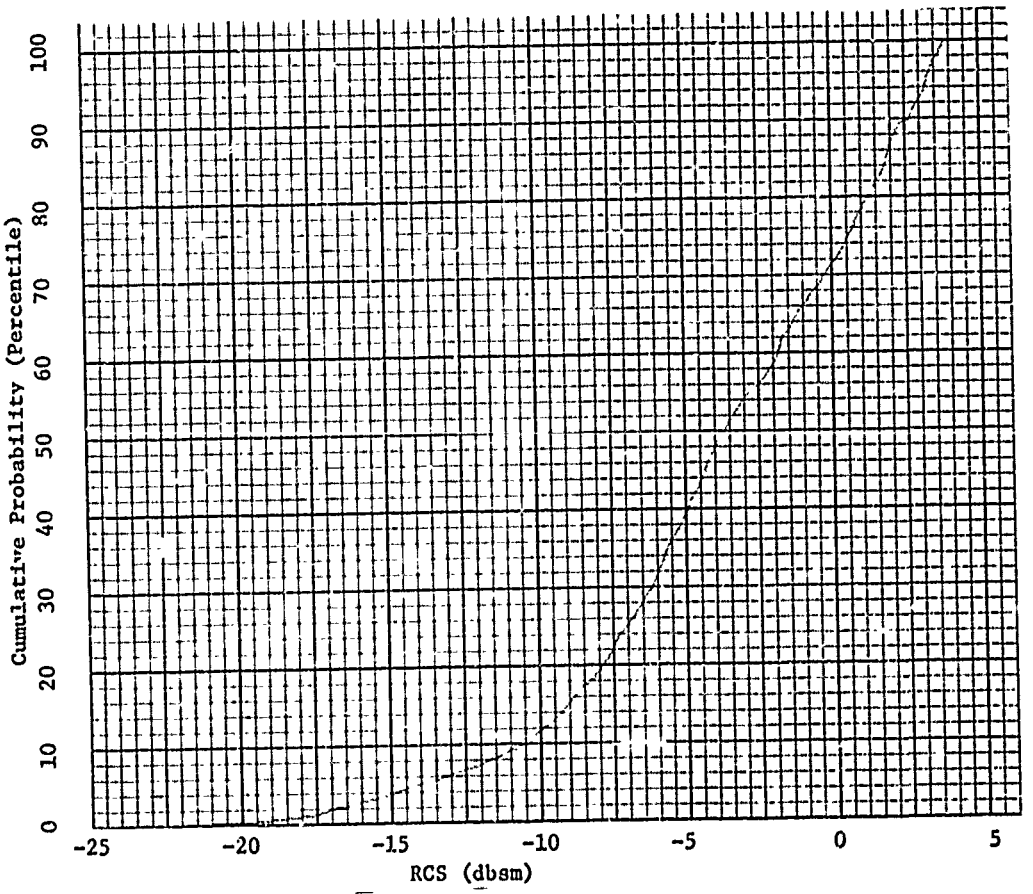


Figure 9B. Cumulative Probability of Frontal Cross Section
BQM-34F, HH Polarization

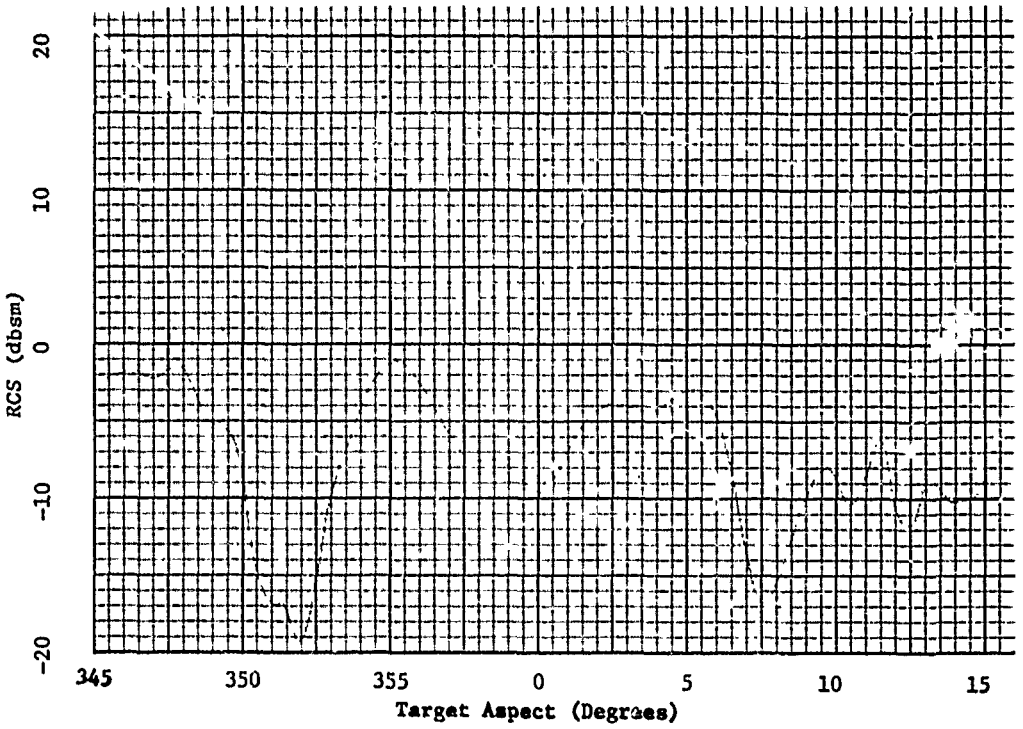


Figure 10A. Mean Frontal Cross Section
BQM-34F, VH Polarization

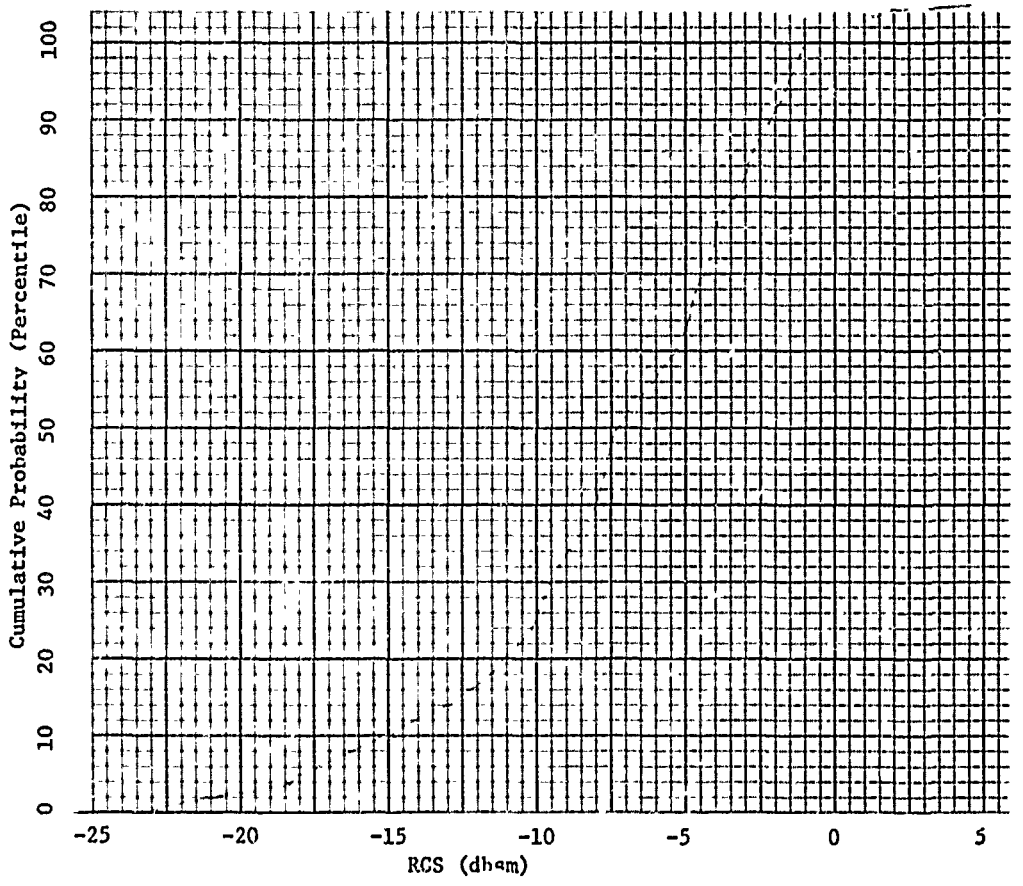


Figure 10B. Cumulative Probability of Frontal Cross Section
BQM-34F, VH Polarization

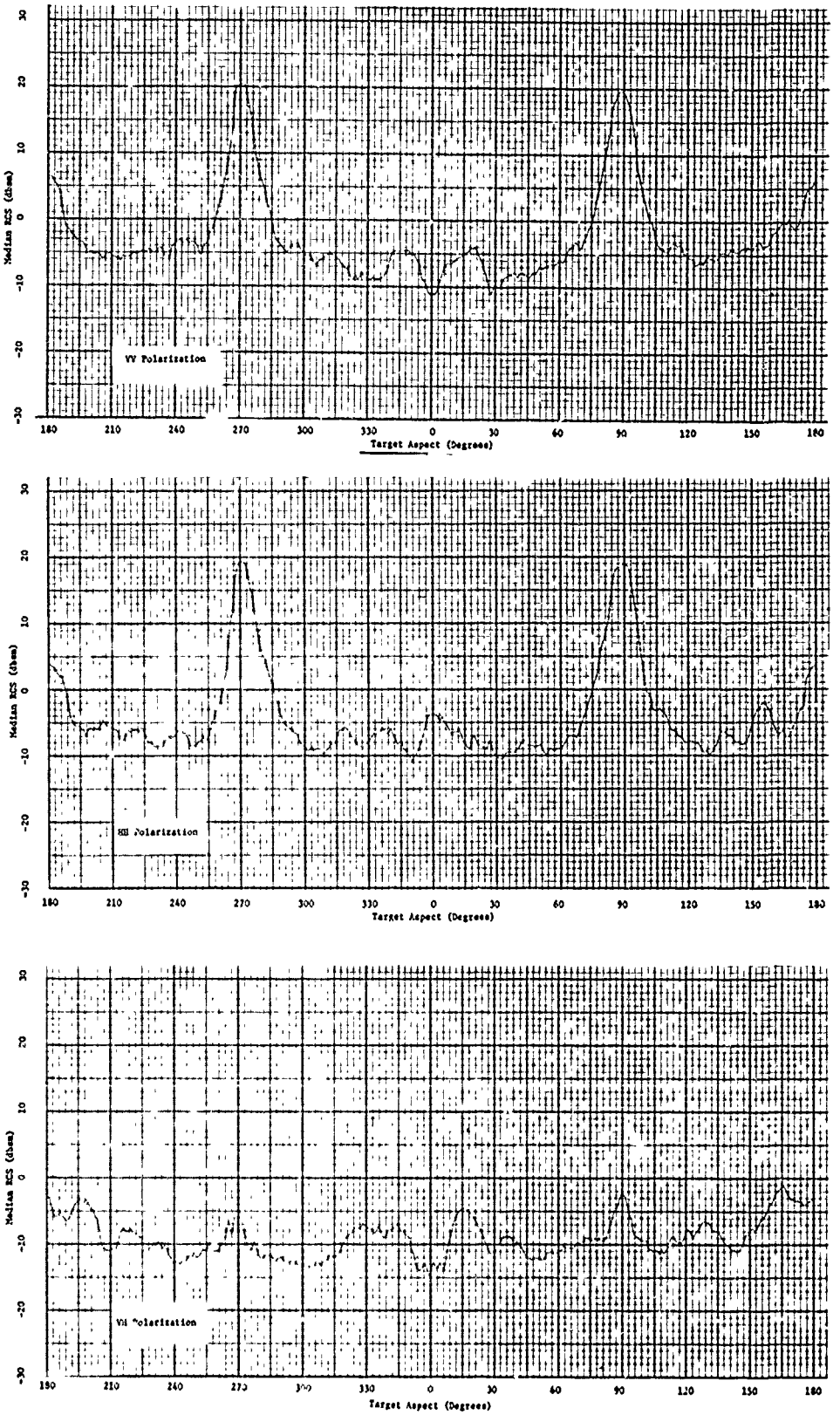


Figure 11. Monostatic Radar Cross Section, BQM-34A
0 Degree Pitch, 0 Degree Roll Vehicle Orientation

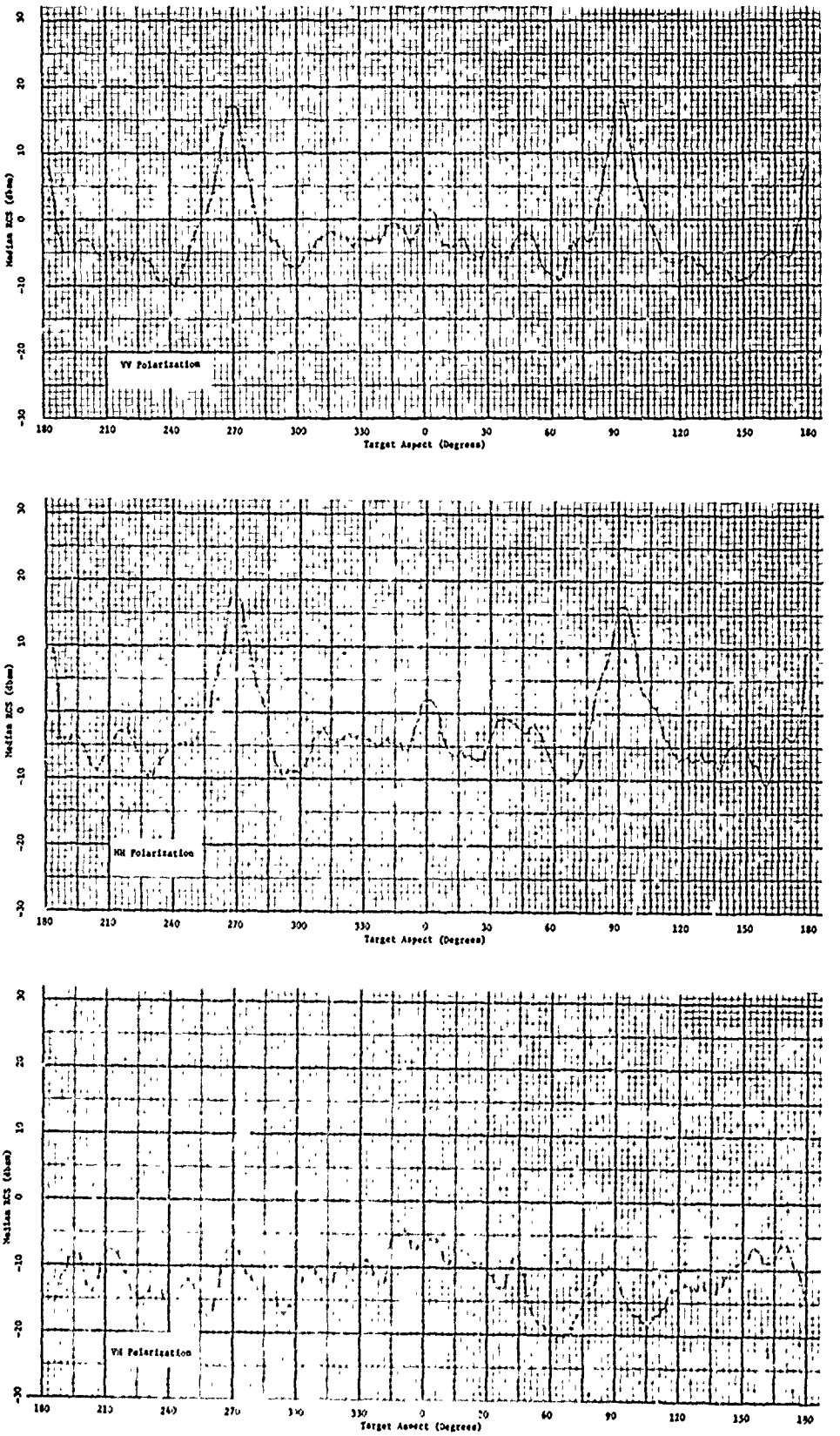


Figure 12. Monostatic Radar Cross Section, BQM-34F
0 Degree Pitch, 0 Degree Roll Vehicle Orientation

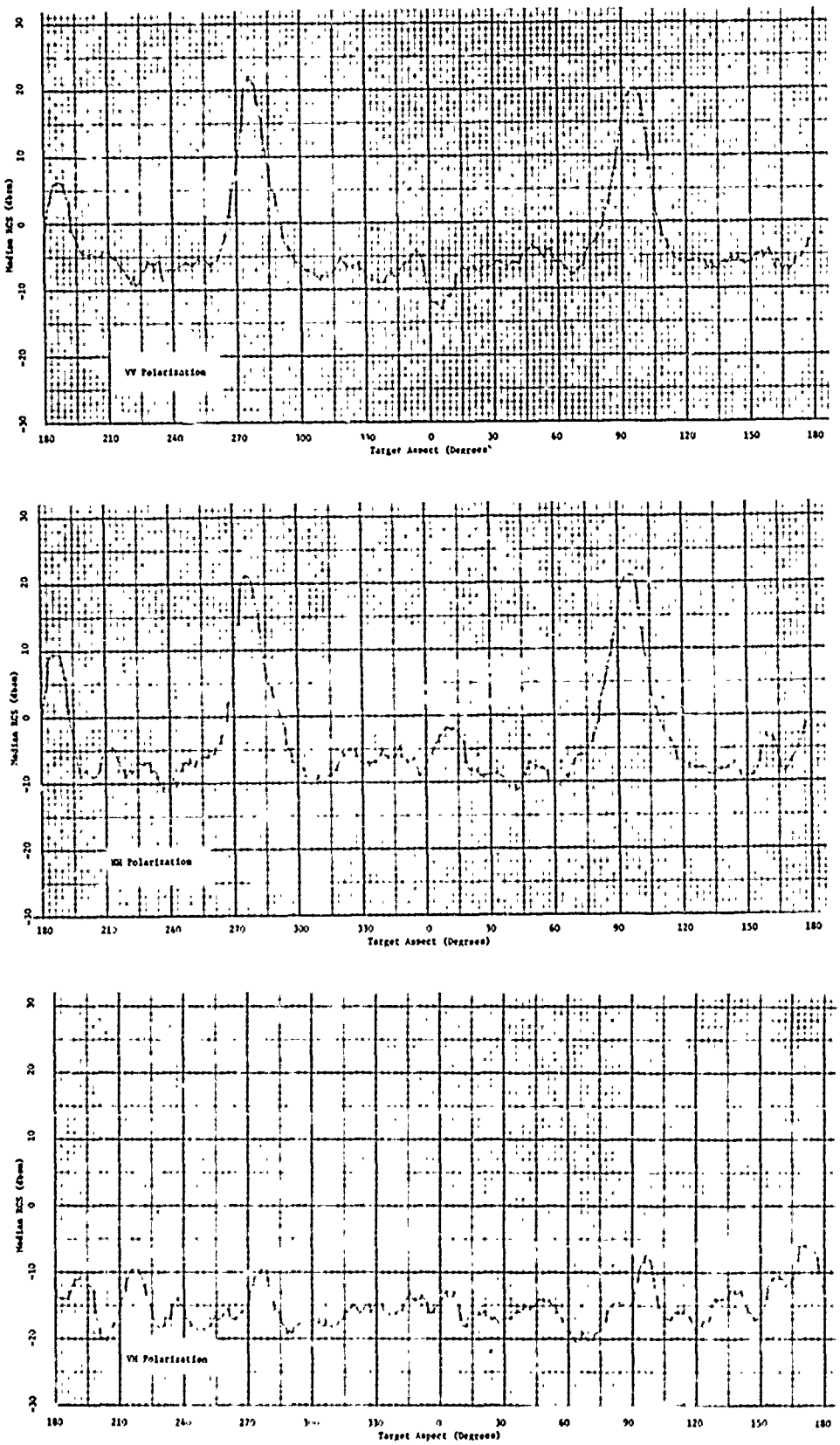


Figure 13. 10 Degree Bistatic Radar Cross Section, BQM-34A
0 Degree Pitch, 0 Degree Roll Vehicle Orientation

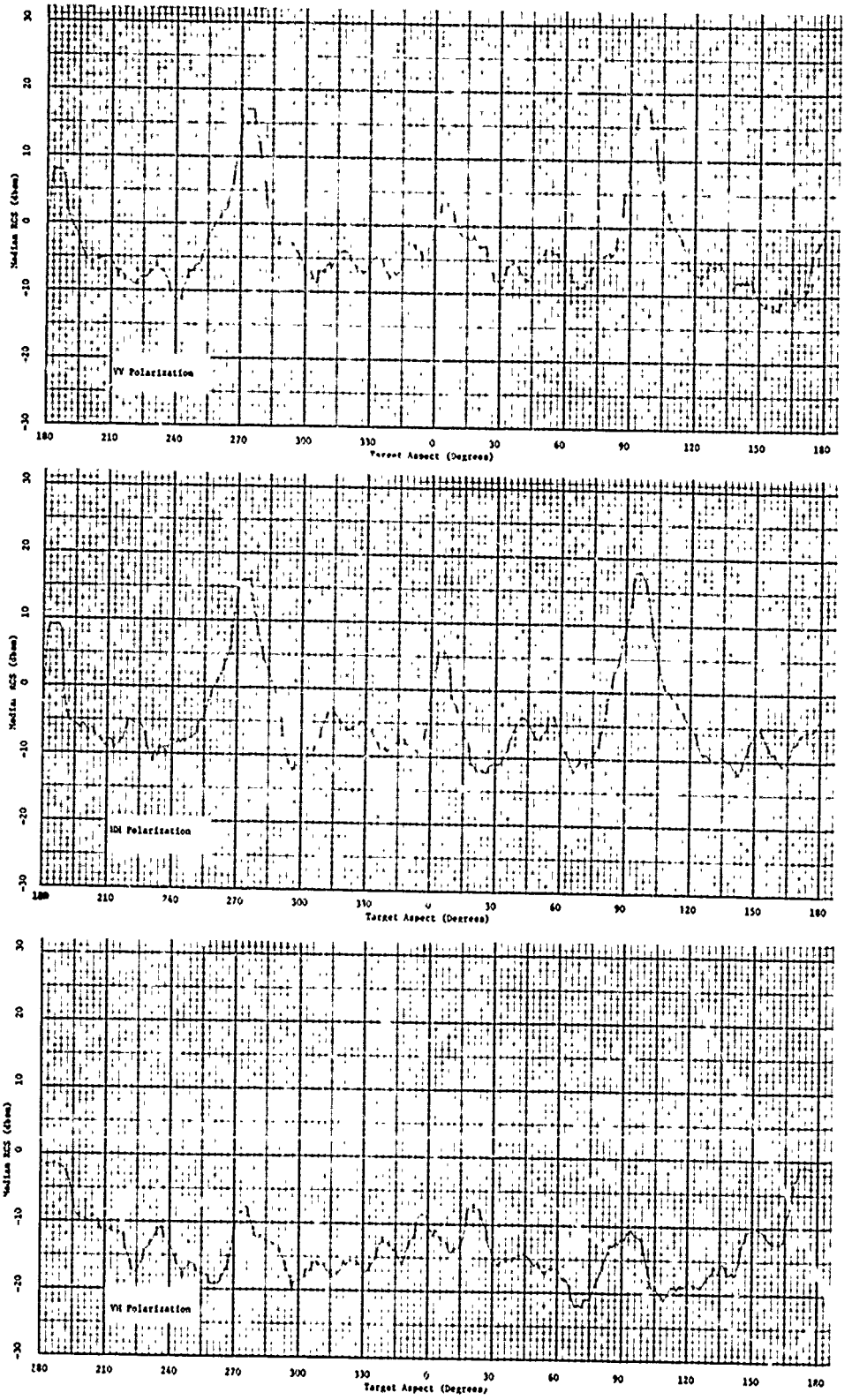


Figure 14. 10 Degree Bistatic Radar Cross Section, BQM-34F 0 Degree Pitch, 0 Degree Roll Vehicle Orientation

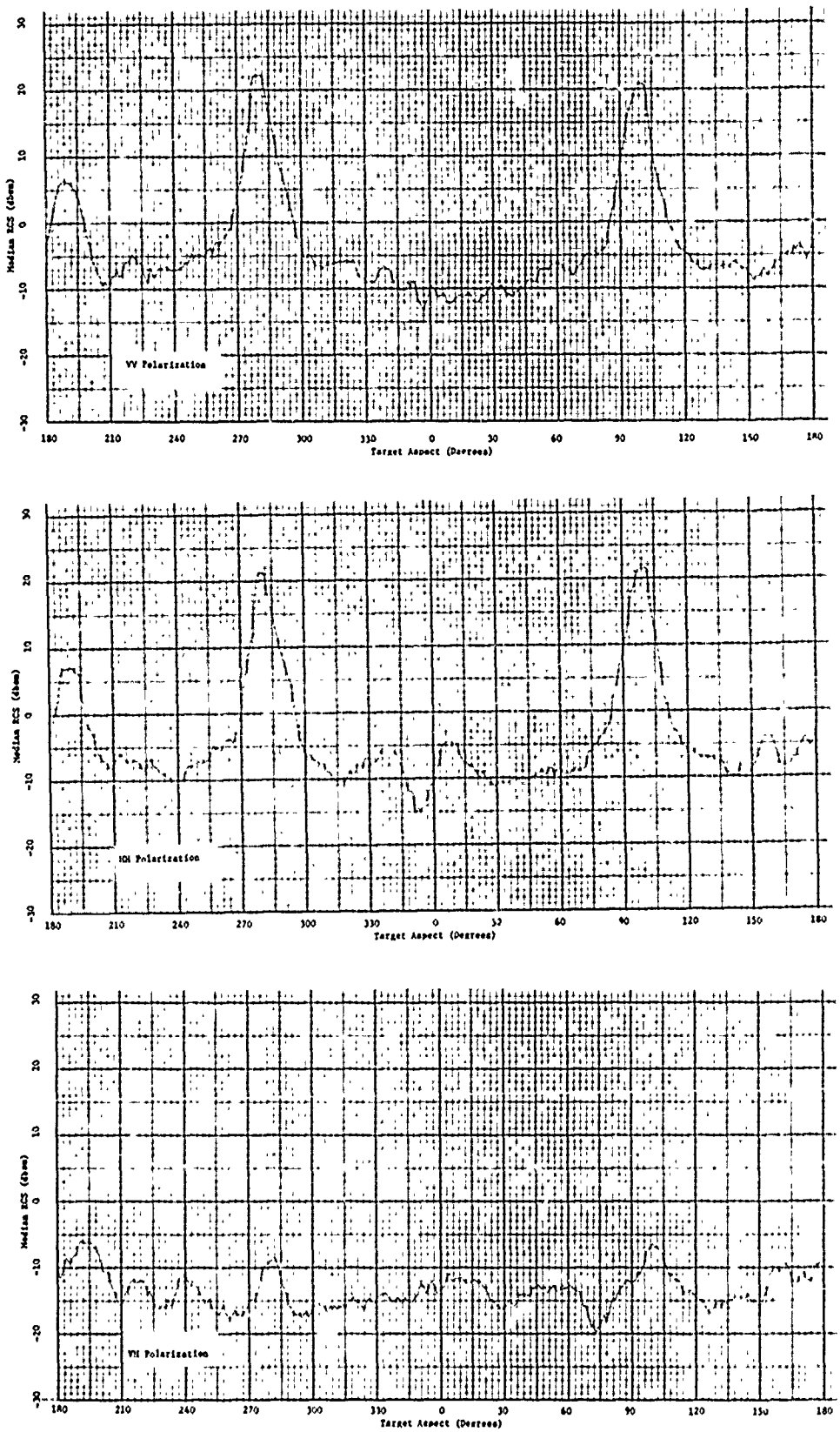


Figure 15. 20 Degree Bistatic Radar Cross Section, BQM-34A
0 Degree Pitch, 0 Degree Roll Vehicle Orientation

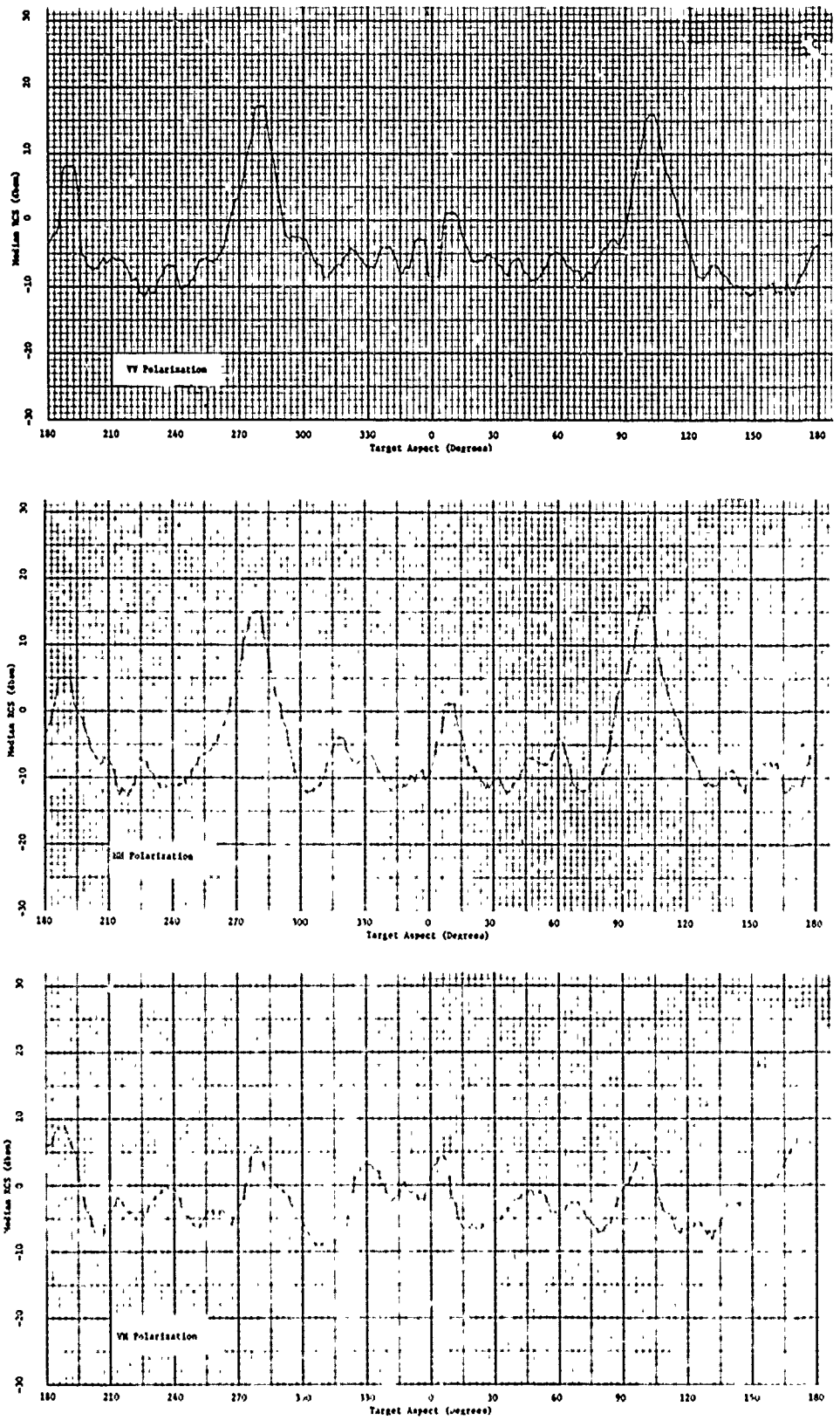


Figure 16. 20 Degree Bistatic Radar Cross Section, BQM-34F
0 Degree Pitch, 0 Degree Roll Vehicle Orientation

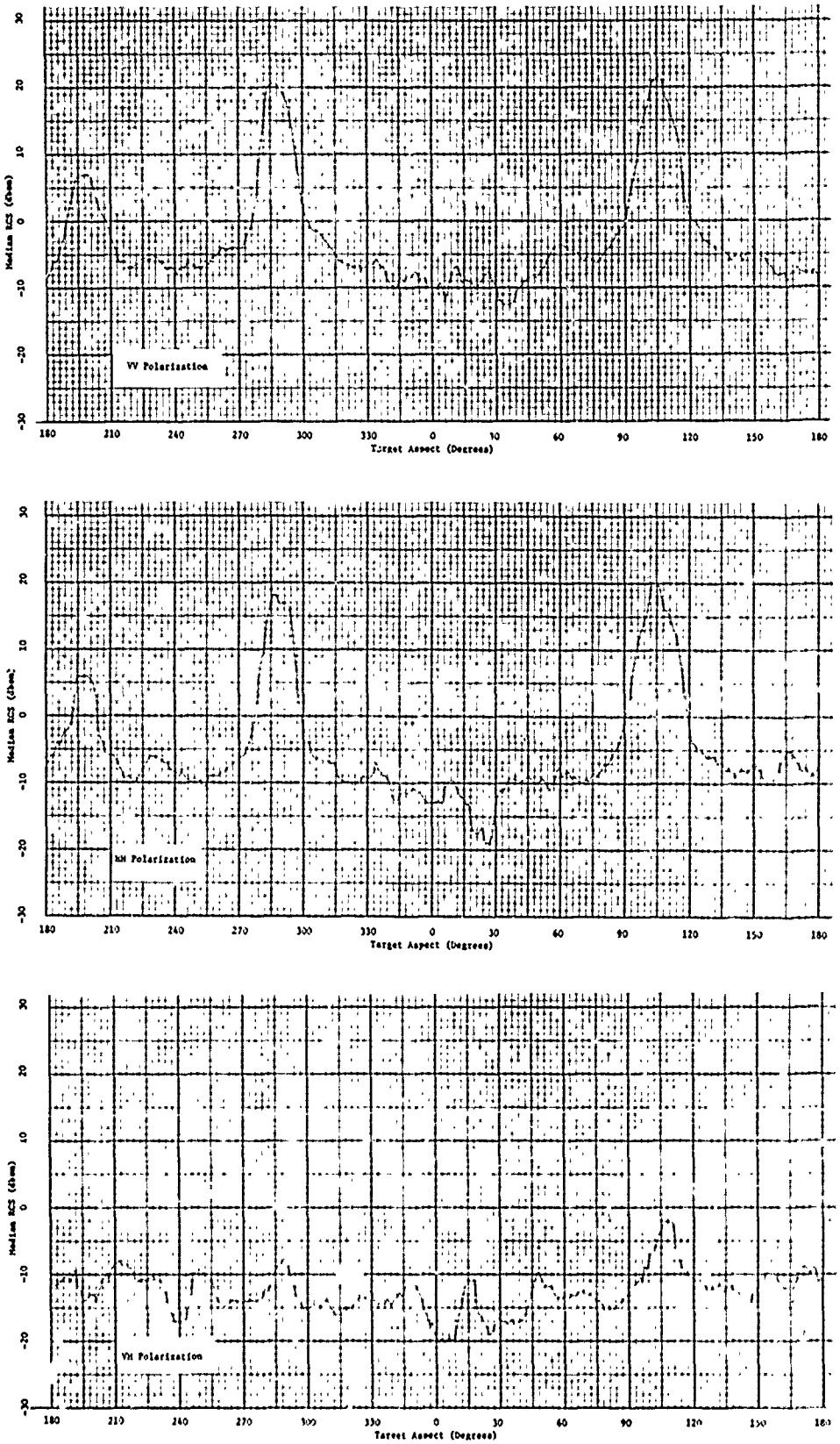


Figure 17. 30 Degree Bistatic Radar Cross Section, BQM-34A
0 Degree Pitch, 0 Degree Roll Vehicle Orientation

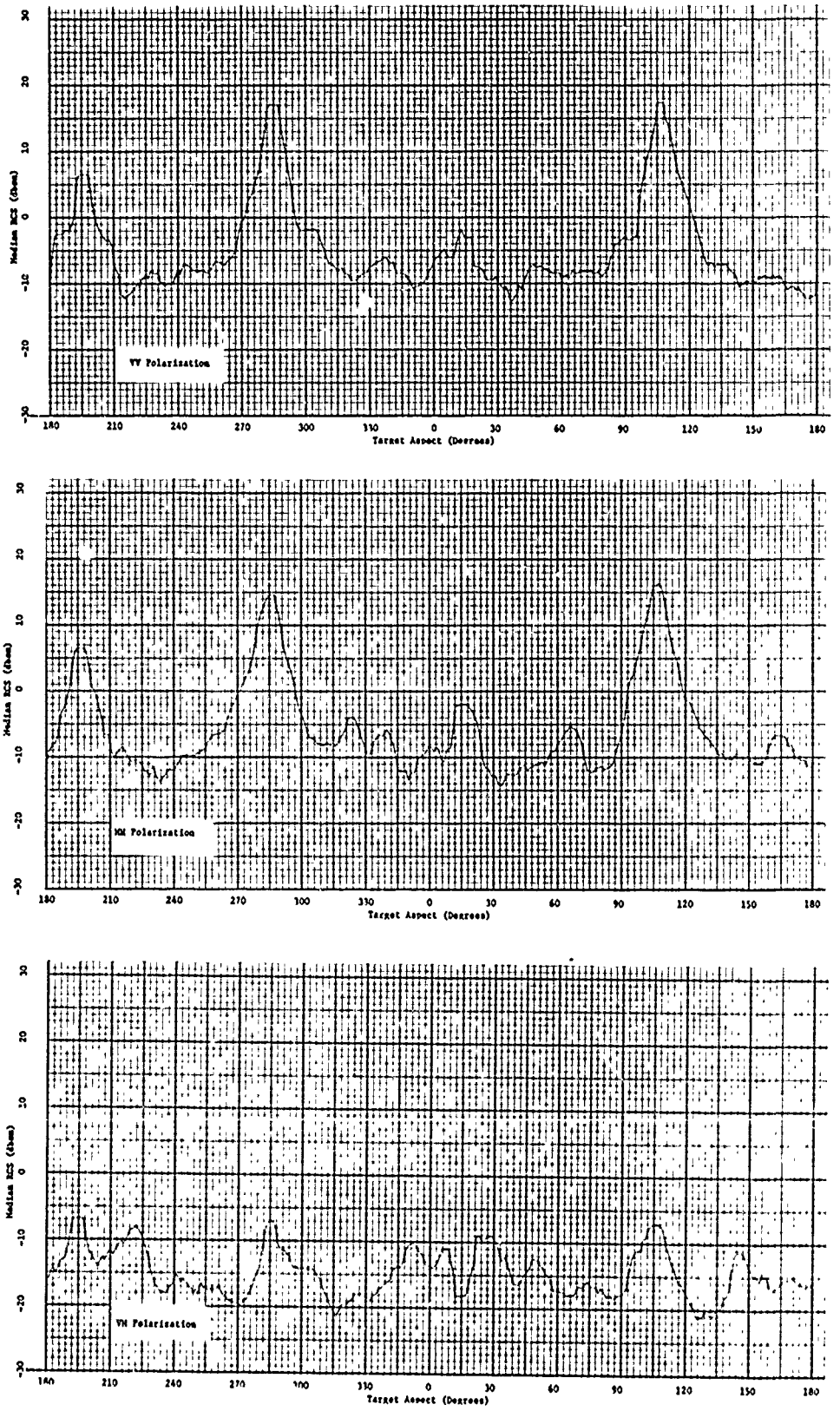
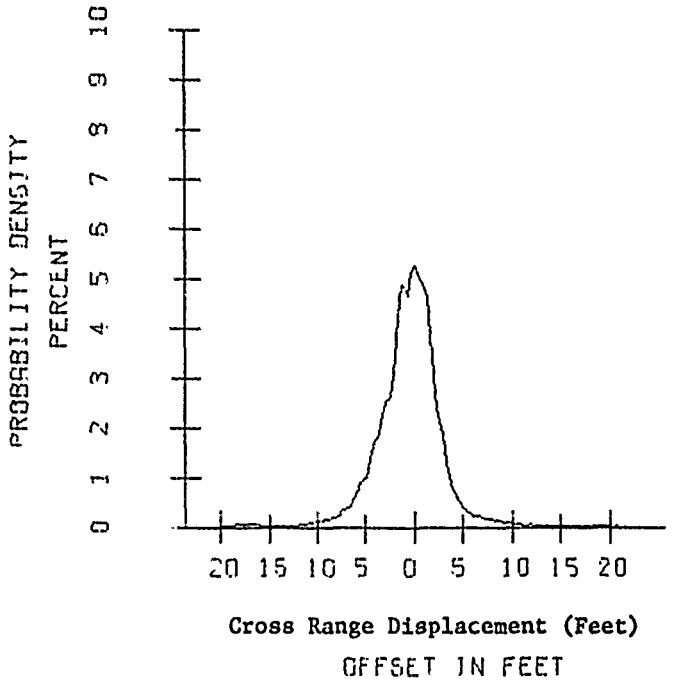


Figure 18. 30 Degree Bistatic Radar Cross Section, BQM-34F
0 Degree Pitch, 0 Degree Roll Vehicle Orientation



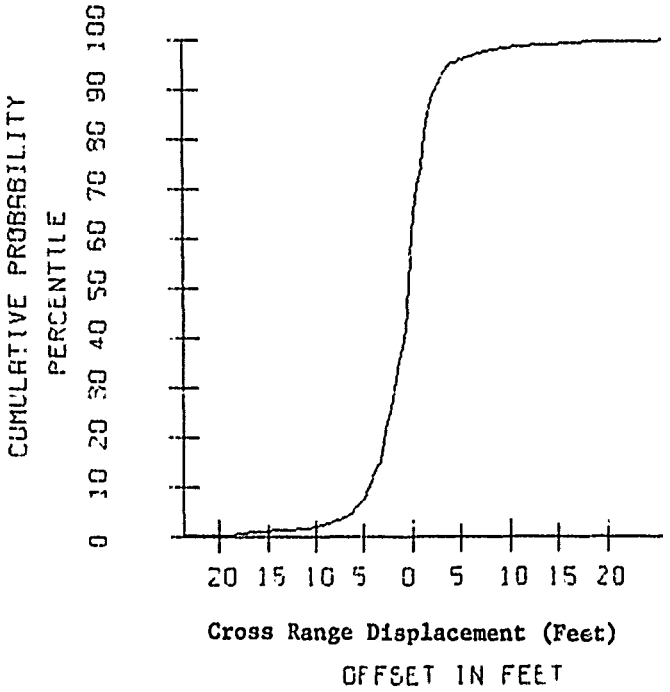
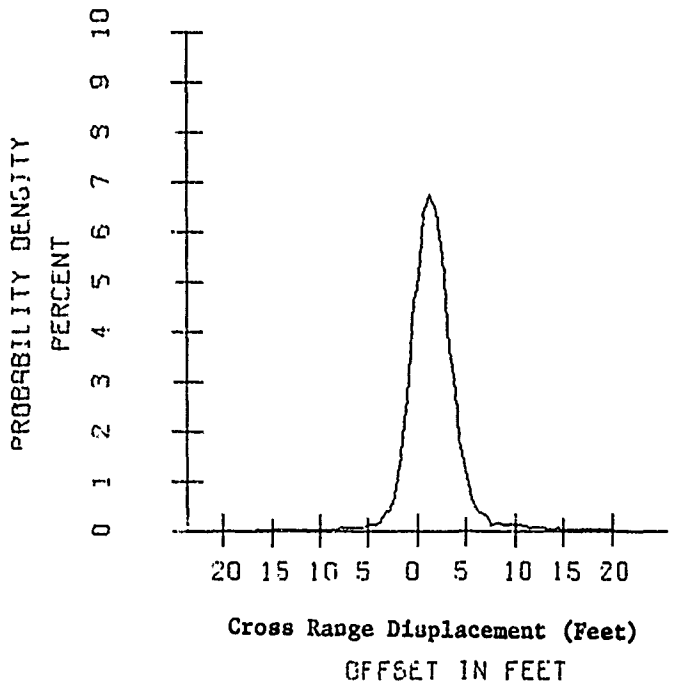


Figure 19. BQM-34A, Glint Distribution
30° Frontal Aspect Zone, VV Polarization



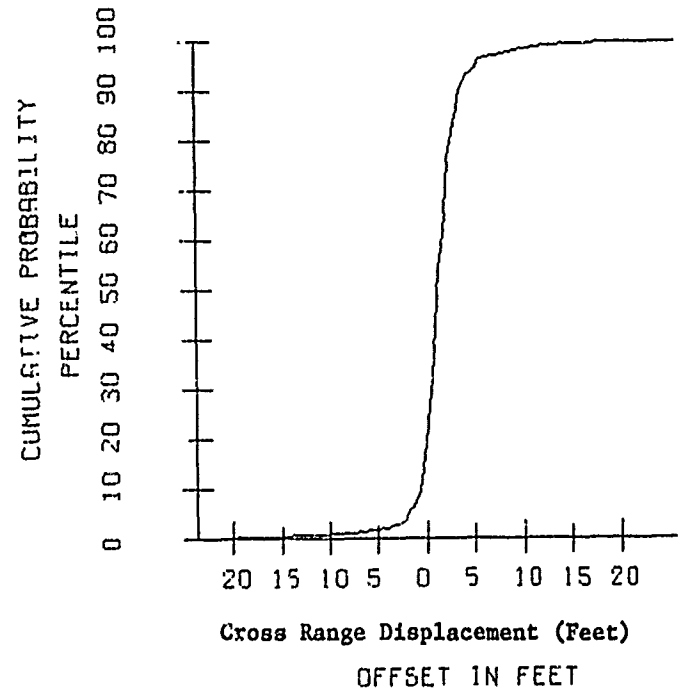


Figure 20. BQM-34A, Glint Distribution
30° Frontal Aspect Zone, HH Polarization

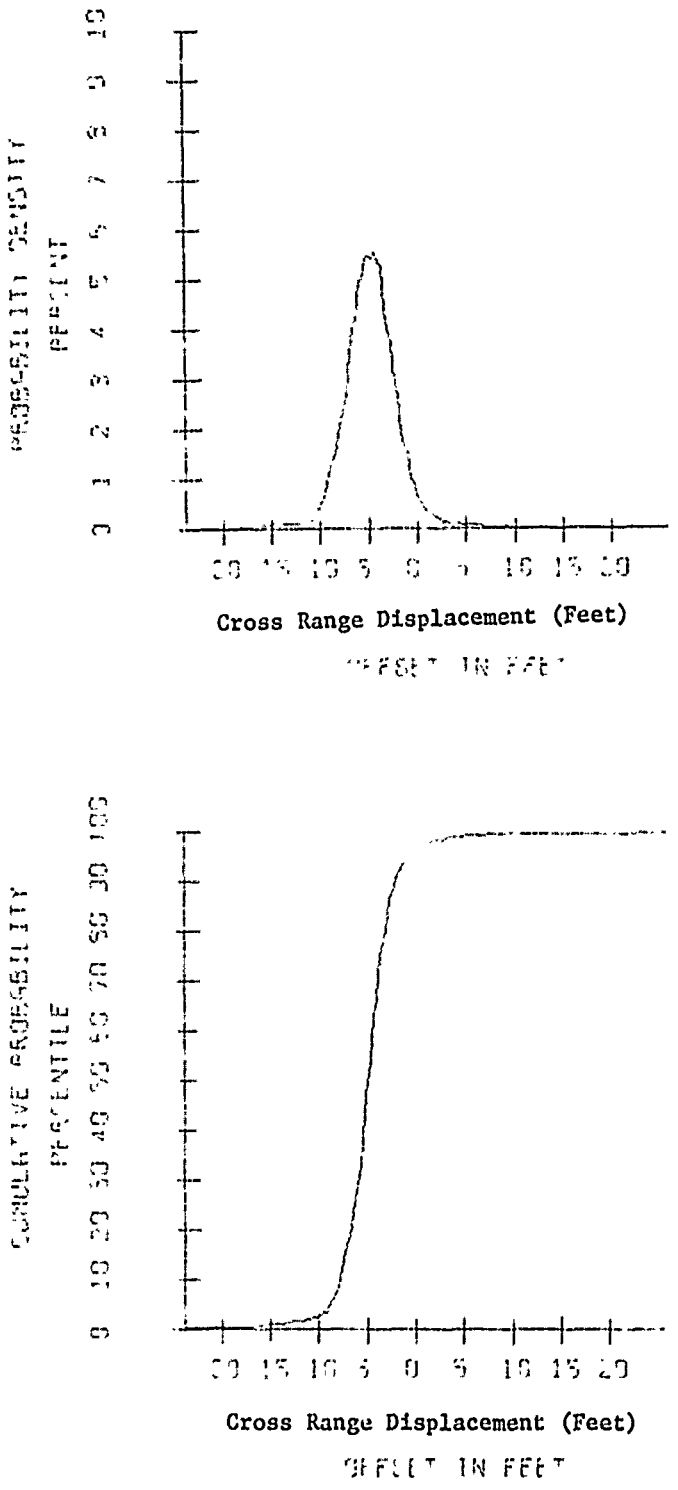
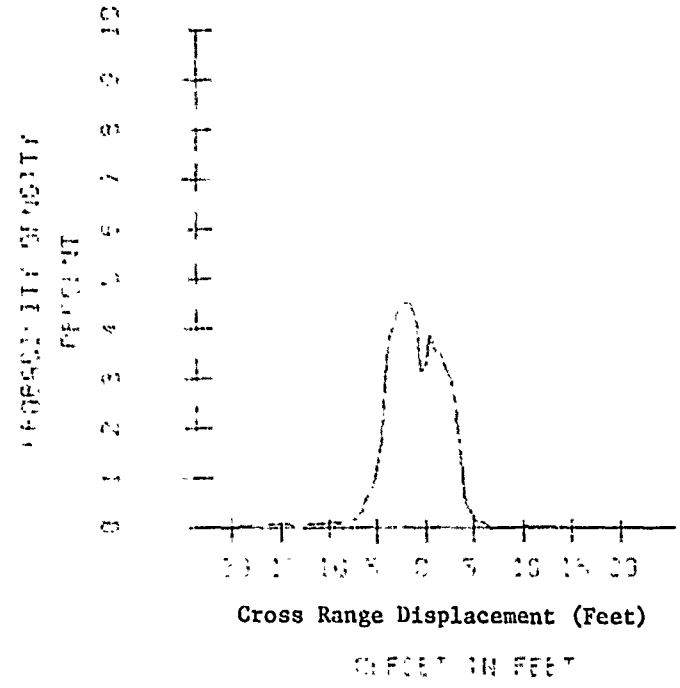


Figure 21. BQH-34A, Glint Distribution
30° Frontal Aspect Zone, VH Polarization



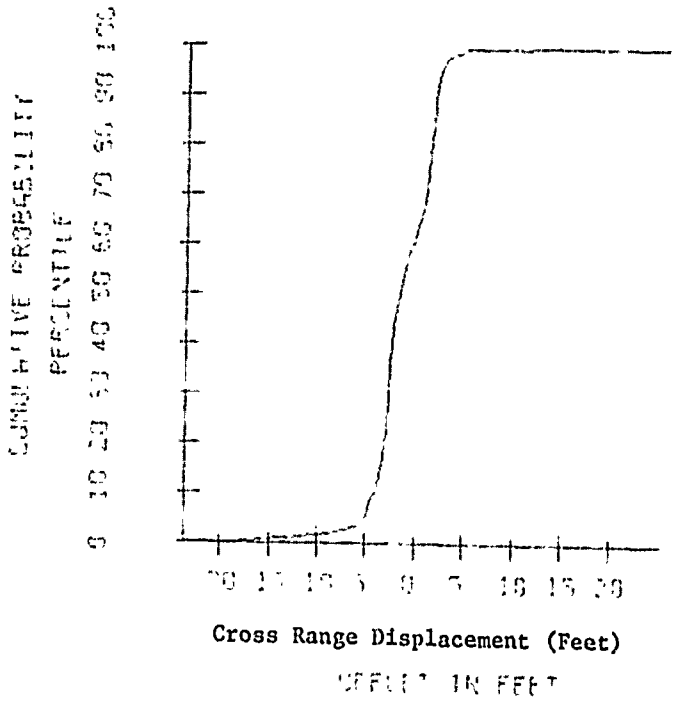
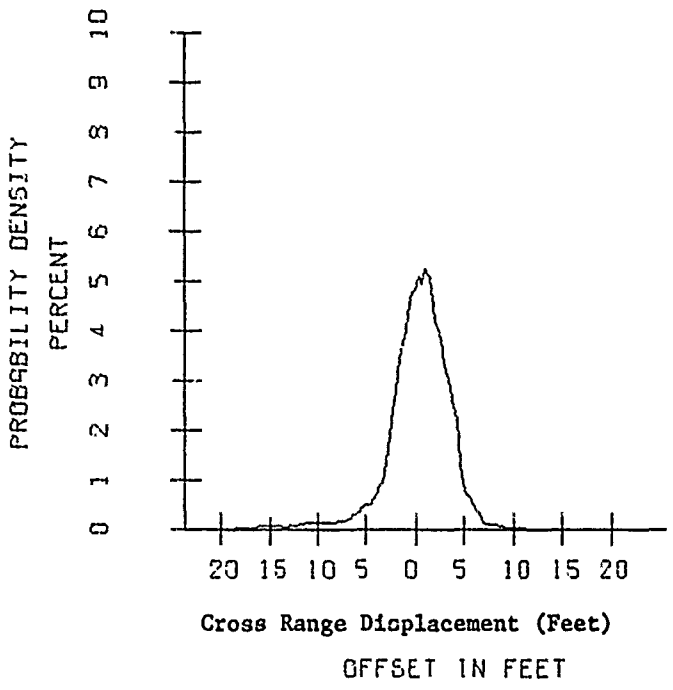


Figure 22. BQM-34F, Glint Distribution
30° Frontal Aspect Zone, VV Polarization



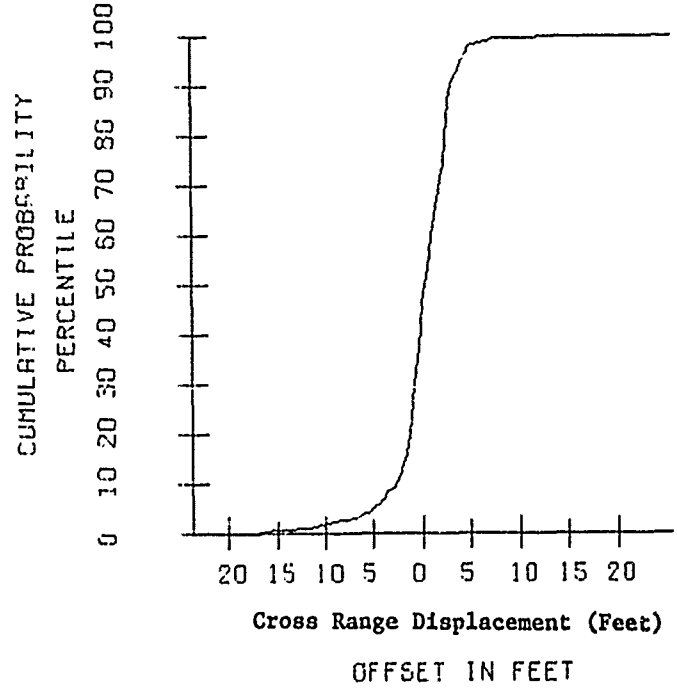
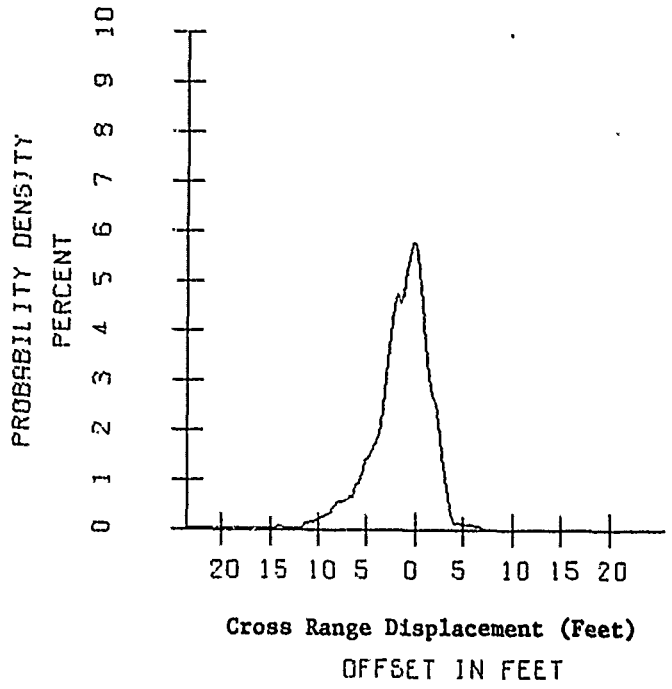


Figure 23. BQM-34F, Glint Distribution
30° Frontal Aspect Zone, HH Polarization



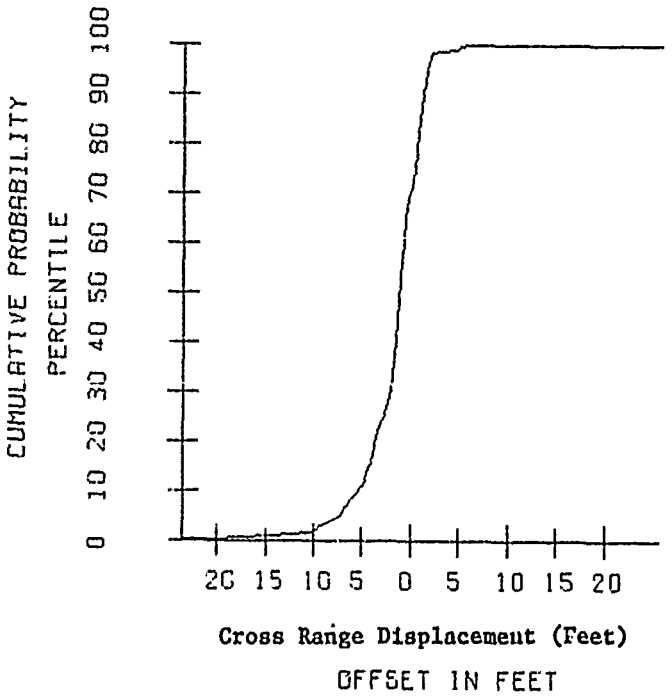


Figure 24. BQM-34F, Glint Distribution
30° Frontal Aspect Zone, VH Polarization

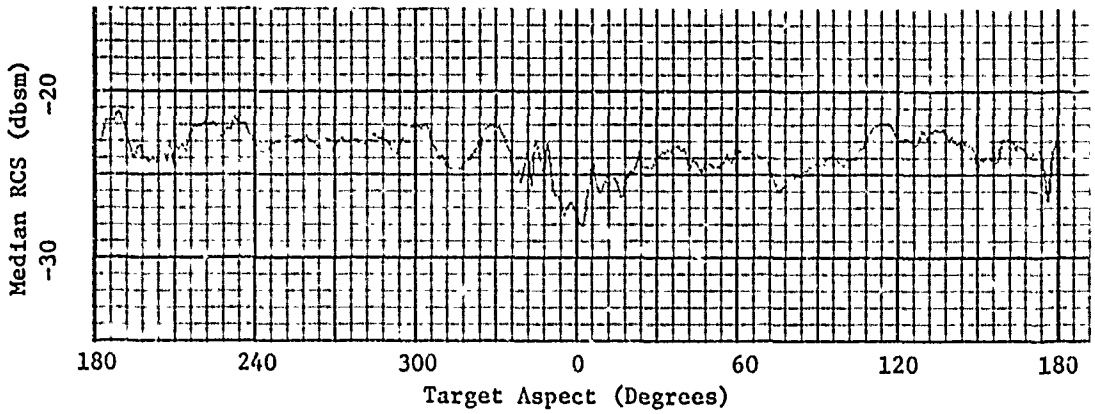


Figure 25a. Median Background Level, VV Polarization.

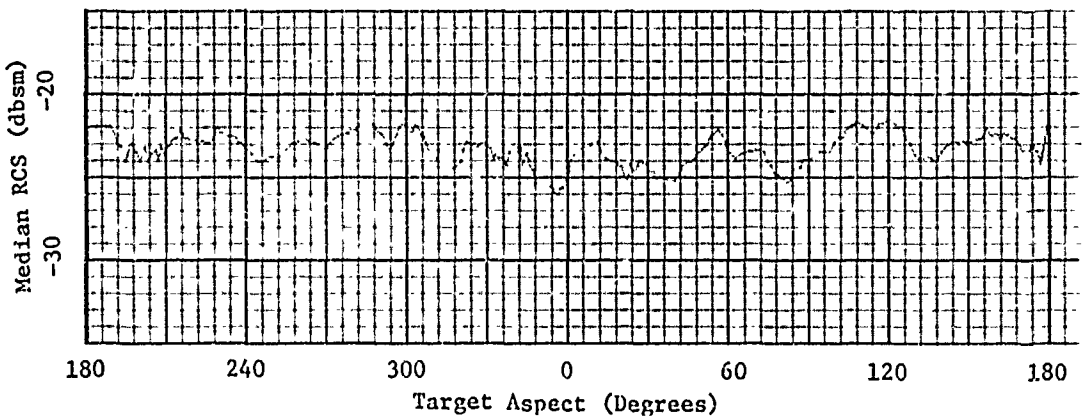


Figure 25b. Median Background Level, HH Polarization.

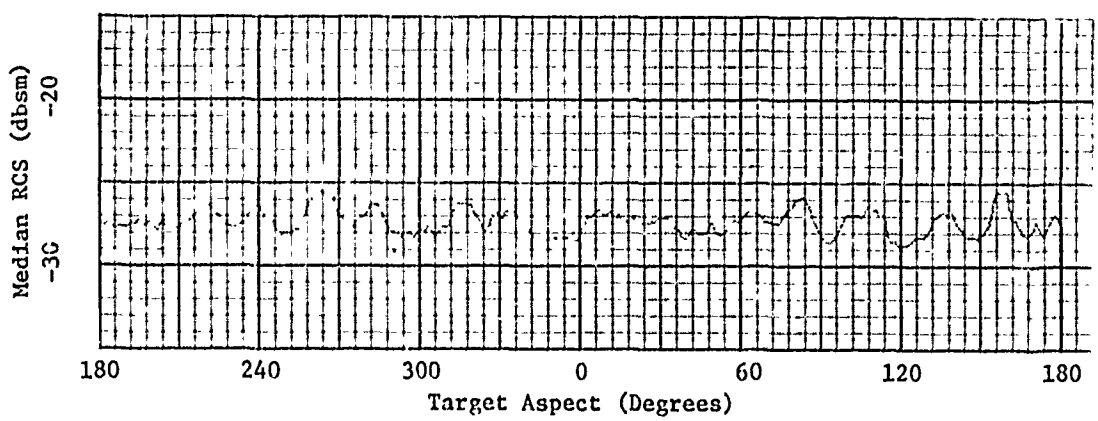


Figure 25c. Median Background Level, VH Polarization.

CONTROL NUMBER 72-17 Table I DATA PLOT INDEX Sheet 1

PAGE NO.	RUN	FREQ (MHz)	POLARIZATION	PITCH ANGLE	ROLL ANGLE	BISTATIC ANGLE	TARGET CONFIGURATION AND REMARKS
37	313A	5500	HH	0°	0°	0°	BQM-34A, RCS
38	313G	5500	HH	0	0	0	BQM-34A, Glint
39	315A	5500	VV	0	0	0	BQM-34A, RCS
40	315G	5500	VV	0	0	0	BQM-34A, Glint
41	318A	5500	VH	0	0	0	BQM-34A, RCS
42	318G	5500	VH	0	0	0	BQM-34A, Glint
43	927A	5500	HH	0	30	0	BQM-34A, RCS
44	927G	5500	HH	0	30	0	BQM-34A, Glint
45	925A	5500	VV	0	30	0	BQM-34A, RCS
46	925G	5500	VV	0	30	0	BQM-34A, Glint
47	929A	5500	VH	0	30	0	BQM-34A, RCS
48	929G	5500	VH	0	30	0	BQM-34A, Glint
49	936A	5500	HH	0	60	0	BQM-34A, RCS
50	936G	5500	HH	0	60	0	BQM-34A, Glint
51	940A	5500	VV	0	60	0	BQM-34A, RCS
52	940G	5500	VV	0	60	0	BQM-34A, Glint
53	938A	5500	VH	0	60	0	BQM-34A, RCS
54	938G	5500	VH	0	60	0	BQM-34A, Glint
55	214A	5500	HH	0	90	0	BQM-34A, RCS
56	214G	5500	HH	0	90	0	BQM-34A, Glint
57	218A	5500	VV	0	90	0	BQM-34A, RCS
58	218G	5500	VV	0	90	0	BQM-34A, Glint
59	216A	5500	VH	0	90	0	BQM-34A, RCS
60	216G	5500	VH	0	90	0	BQM-34A, Glint
61	225A	5500	HH	10	0	0	BQM-34A, RCS
62	225G	5500	HH	10	0	0	BQM-34A, Glint
63	228A	5500	VV	10	0	0	BQM-34A, RCS
64	228G	5500	VV	10	0	0	BQM-34A, Glint
65	226A	5500	VH	10	0	0	BQM-34A, RCS
66	226G	5500	VH	10	0	0	BQM-34A, Glint
67	230A	5500	HH	10	30	0	BQM-34A, RCS
68	230G	5500	HH	10	30	0	BQM-34A, Glint

CONTROL NUMBER 72-17 Table I DATA PLOT INDEX Sheet 2

PAGE NO.	RUN	FREQ (MHz)	POLARIZATION	PITCH ANGLE	ROLL ANGLE	BISTATIC ANGLE	TARGET CONFIGURATION AND REMARKS
69	234A	5500	VV	10°	30°	0°	BQM-34A, RCS
70	234G	5500	VV	10	30	0	BQM-34A, Glint
71	232A	5500	VH	10	30	0	BQM-34A, RCS
72	232G	5500	VH	10	30	0	BQM-34A, Glint
73	240A	5500	HH	10	60	0	BQM-34A, RCS
74	240G	5500	HH	10	60	0	BQM-34A, Glint
75	236A	5500	VV	10	60	0	BQM-34A, RCS
76	236G	5500	VV	10	60	0	BQM-34A, Glint
77	238A	5500	VH	10	60	0	BQM-34A, RCS
78	238G	5500	VH	10	60	0	BQM-34A, Glint
79	242A	5500	HH	10	90	0	BQM-34A, RCS
80	242G	5500	HH	10	90	0	BQM-34A, Glint
81	246A	5500	VV	10	90	0	BQM-34A, RCS
82	246G	5500	VV	10	90	0	BQM-34A, Glint
83	244A	5500	VH	10	90	0	BQM-34A, RCS
84	244G	5500	VH	10	90	0	BQM-34A, Glint
85	254A	5500	HH	20	0	0	BQM-34A, RCS
86	254G	5500	HH	20	0	0	BQM-34A, Glint
87	258A	5500	VV	20	0	0	BQM-34A, RCS
88	258G	5500	VV	20	0	0	BQM-34A, Glint
89	256A	5500	VH	20	0	0	BQM-34A, RCS
90	256G	5500	VH	20	0	0	BQM-34A, Glint
91	264A	5500	HH	20	30	0	BQM-34A, RCS
92	264G	5500	HH	20	30	0	BQM-34A, Glint
93	260A	5500	VV	20	30	0	BQM-34A, RCS
94	260G	5500	VV	20	30	0	BQM-34A, Glint
95	262A	5500	VH	20	30	0	BQM-34A, RCS
96	262G	5500	VH	20	30	0	BQM-34A, Glint
97	266A	5500	HH	20	60	0	BQM-34A, RCS
98	266G	5500	HH	20	60	0	BQM-34A, Glint
99	270A	5500	VV	20	60	0	BQM-34A, RCS
100	270G	5500	VV	20	60	0	BQM-34A, Glint

CONTROL NUMBER 72-17 Table I DATA PLOT INDEX Sheet 3

PAGE NO.	RUN	FREQ (MHz)	POLARIZATION	PITCH ANGLE	ROLL ANGLE	BISTATIC ANGLE	TARGET CONFIGURATION AND REMARKS
101	268A	5500	VH	20	60	0	BQM-34A, RCS
102	268G	5500	VH	20	60	0	BQM-34A, Glint
103	276A	5500	HH	20	90	0	BQM-34A, RCS
104	276G	5500	HH	20	90	0	BQM-34A, Glint
105	272A	5500	VV	20	90	0	BQM-34A, RCS
106	272G	5500	VV	20	90	0	BQM-34A, Glint
107	274A	5500	VH	20	90	0	BQM-34A, RCS
108	274G	5500	VH	20	90	0	BQM-34A, Glint
109	288A	5500	HH	30	0	0	BQM-34A, RCS
110	288G	5500	HH	30	0	0	BQM-34A, Glint
111	281A	5500	VV	30	0	0	BQM-34A, RCS
112	281G	5500	VV	30	0	0	BQM-34A, Glint
113	286A	5500	VH	30	0	0	BQM-34A, RCS
114	286G	5500	VH	30	0	0	BQM-34A, Glint
115	299A	5500	HH	30	30	0	BQM-34A, RCS
116	299G	5500	HH	30	30	0	BQM-34A, Glint
117	303A	5500	VV	30	30	0	BQM-34A, RCS
118	303G	5500	VV	30	30	0	BQM-34A, Glint
119	301A	5500	VH	30	30	0	BQM-34A, RCS
120	301G	5500	VH	30	30	0	BQM-34A, Glint
121	948A	5500	HH	30	60	0	BQM-34A, RCS
122	948G	5500	HH	30	60	0	BQM-34A, Glint
123	952A	5500	VV	30	60	0	BQM-34A, RCS
124	952G	5500	VV	30	60	0	BQM-34A, Glint
125	950A	5500	VH	30	60	0	BQM-34A, RCS
126	950G	5500	VH	30	60	0	BQM-34A, Glint
127	963A	5500	HH	30	90	0	BQM-34A, RCS
128	963G	5500	HH	30	90	0	BQM-34A, Glint
129	967A	5500	VV	30	90	0	BQM-34A, RCS
130	967G	5500	VV	30	90	0	BQM-34A, Glint
131	965A	5500	VH	30	90	0	BQM-34A, RCS
132	965G	5500	VH	30	90	0	BQM-34A, Glint

CONTROL NUMBER 72-17 Table I DATA PLOT INDEX Sheet 4

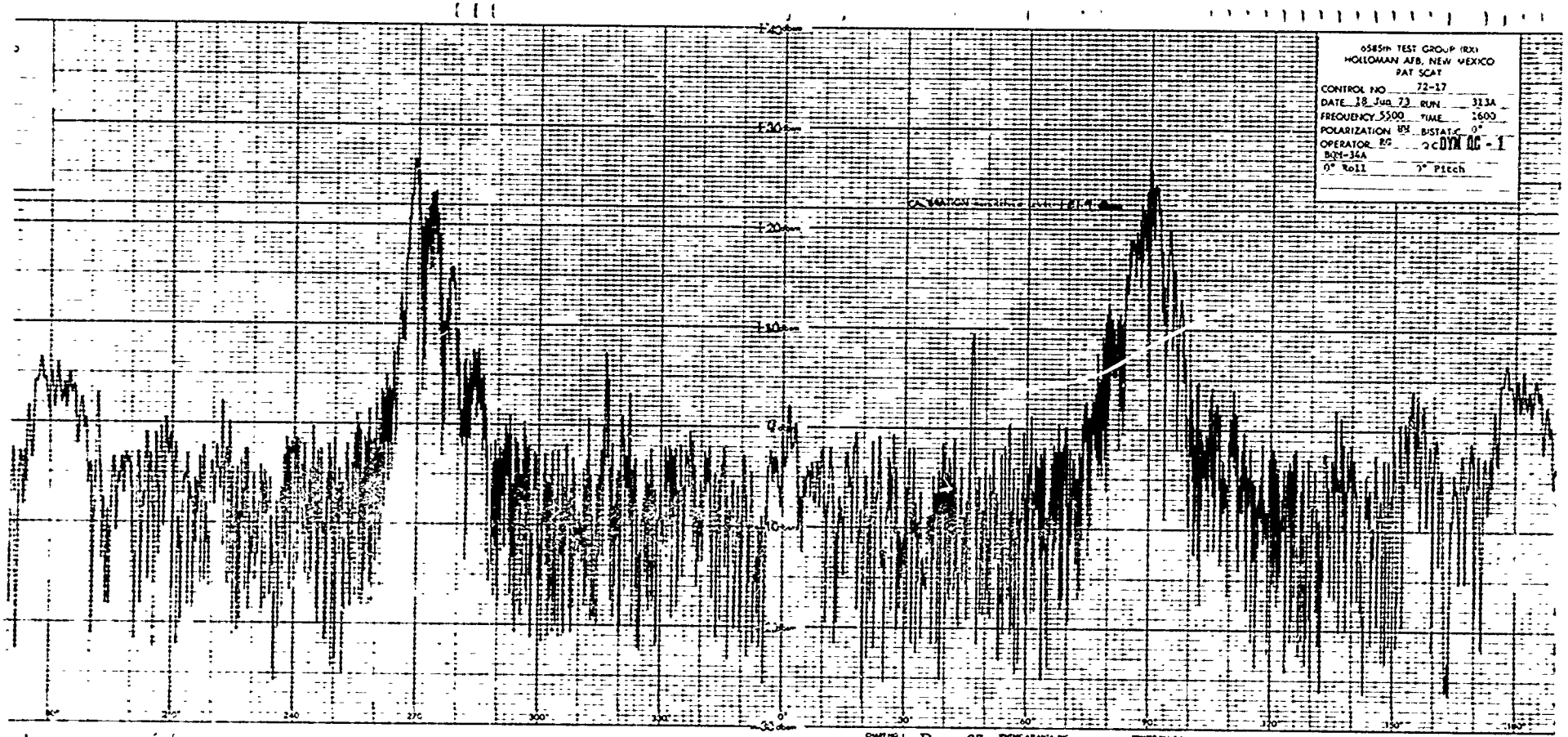
PAGE NO.	RUN	FREQ (MHz)	POLARIZATION	PITCH ANGLE	ROLL ANGLE	BISTATIC ANGLE	TARGET CONFIGURATION AND REMARKS
133	14A	5500	HH	0°	0°	0°	BQM-34F, RCS
134	14G	5500	HH	0	0	0	BQM-34F, Glint
135	10A	5500	VV	0	0	0	BQM-34F, RCS
136	10G	5500	VV	0	0	0	BQM-34F, Glint
137	12A	5500	VH	0	0	0	BQM-34F, RCS
138	12G	5500	VH	0	0	0	BQM-34F, Glint
139	16A	5500	HH	0	30	0	BQM-34F, RCS
140	16G	5500	HH	0	30	0	BQM-34F, Glint
141	20A	5500	VV	0	30	0	BQM-34F, RCS
142	20G	5500	VV	0	30	0	BQM-34F, Glint
143	19A	5500	VH	0	30	0	BQM-34F, RCS
144	19G	5500	VH	0	30	0	BQM-34F, Glint
145	27A	5500	HH	0	60	0	BQM-34F, RCS
146	27G	5500	HH	0	60	0	BQM-34F, Glint
147	23A	5500	VV	0	60	0	BQM-34F, RCS
148	23G	5500	VV	0	60	0	BQM-34F, Glint
149	24A	5500	VH	0	60	0	BQM-34F, RCS
150	24G	5500	VH	0	60	0	BQM-34F, Glint
151	29A	5500	HH	0	90	0	BQM-34F, RCS
152	29G	5500	HH	0	90	0	BQM-34F, Glint
153	33A	5500	VV	0	90	0	BQM-34F, RCS
154	33G	5500	VV	0	90	0	BQM-34F, Glint
155	31A	5500	VH	0	90	0	BQM-34F, RCS
156	31G	5500	VH	0	90	0	BQM-34F, Glint
157	40A	5500	HH	10	0	0	BQM-34F, RCS
158	40G	5500	HH	10	0	0	BQM-34F, Glint
159	34A	5500	VV	10	0	0	BQM-34F, RCS
160	34G	5500	VV	10	0	0	BQM-34F, Glint
161	42A	5500	VH	10	0	0	BQM-34F, RCS
162	42G	5500	VH	10	0	0	BQM-34F, Glint
163	44A	5500	HH	10	30	0	BQM-34F, RCS
164	44G	5500	HH	10	30	0	BQM-34F, Glint

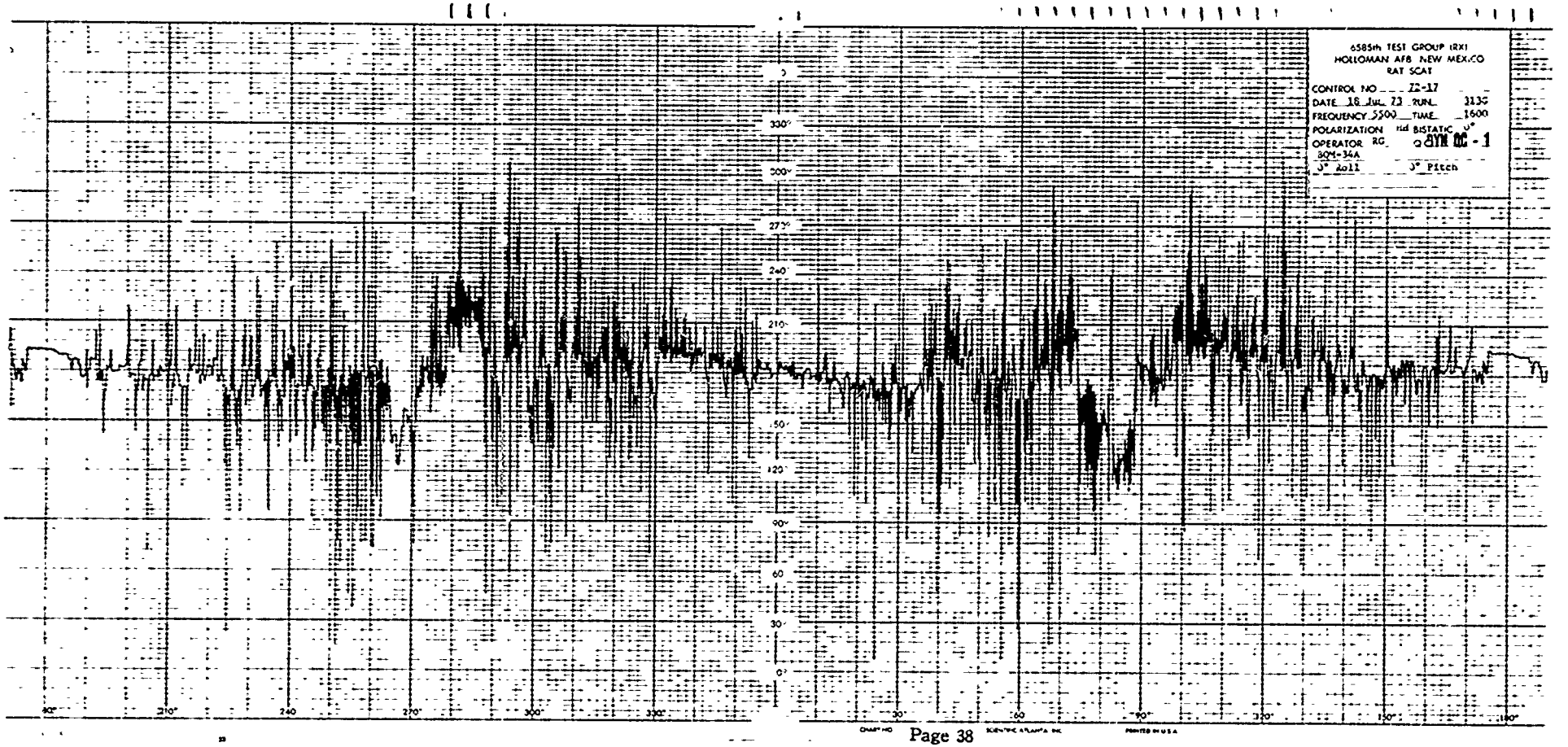
CONTROL NUMBER 72-17 Table I DATA PLOT INDEX Sheet 5

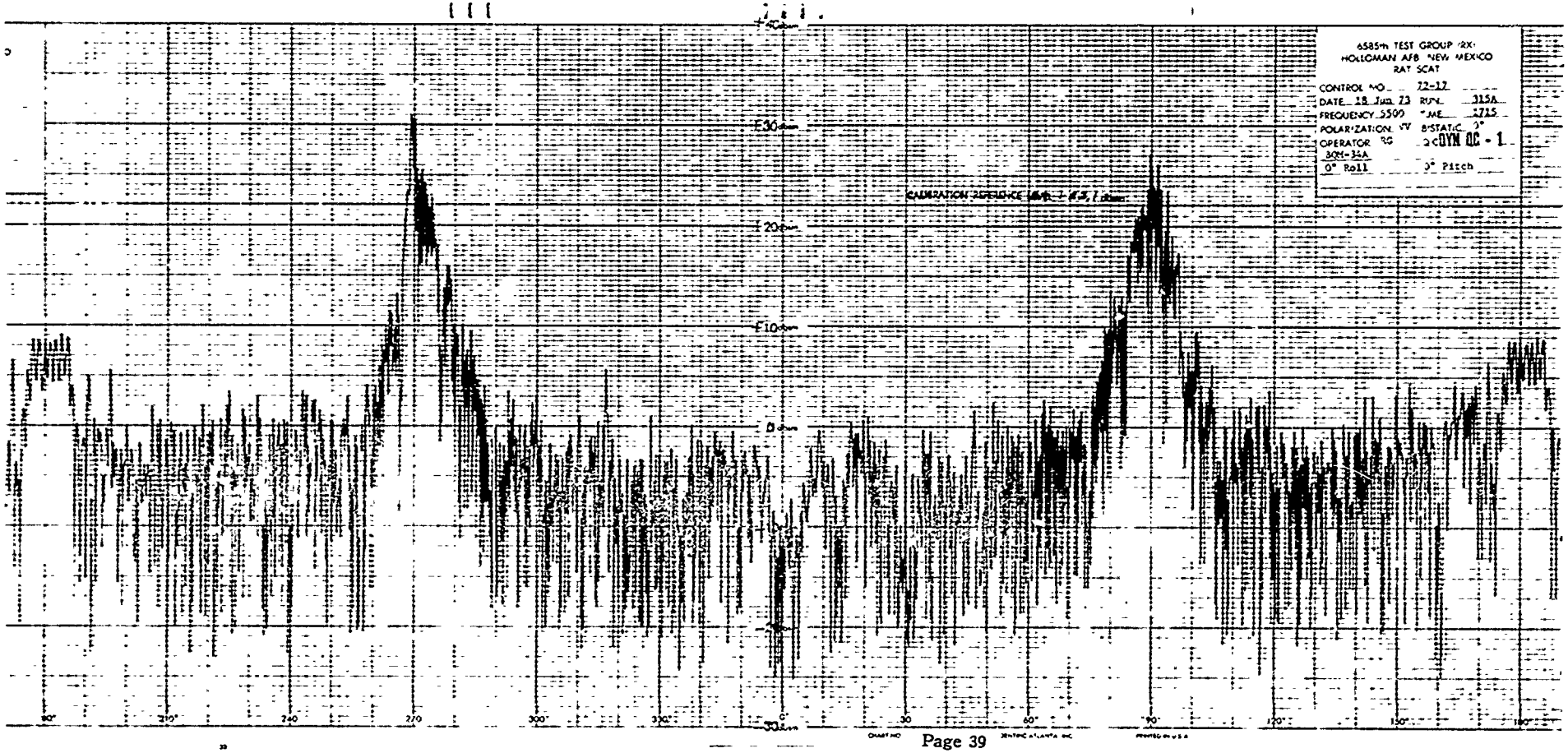
PAGE NO.	RUN	FREQ (MHz)	POLARIZATION	PITCH ANGLE	ROLL ANGLE	BISTATIC ANGLE	TARGET CONFIGURATION AND REMARKS
165	46A	5500	VV	10°	30°	0°	BQM-34F, RCS
166	46G	5500	VV	10	30	0	BQM-34F, Glint
167	48A	5500	VH	10	30	0	BQM-34F, RCS
168	48G	5500	VH	10	30	0	BQM-34F, Glint
169	52A	5500	HH	10	60	0	BQM-34F, RCS
170	52G	5500	HH	10	60	0	BQM-34F, Glint
171	50A	5500	VV	10	60	0	BQM-34F, RCS
172	50G	5500	VV	10	60	0	BQM-34F, Glint
173	54A	5500	VH	10	60	0	BQM-34F, RCS
174	54G	5500	VH	10	60	0	BQM-34F, Glint
175	56A	5500	HH	10	90	0	BQM-34F, RCS
176	56G	5500	HH	10	90	0	BQM-34F, Glint
177	60A	5500	VV	10	90	0	BQM-34F, RCS
178	60G	5500	VV	10	90	0	BQM-34F, Glint
179	58A	5500	VH	10	90	0	BQM-34F, RCS
180	58G	5500	VH	10	90	0	BQM-34F, Glint
181	115A	5500	HH	20	0	0	BQM-34F, RCS
182	115G	5500	HH	20	0	0	BQM-34F, Glint
183	117A	5500	VV	20	0	0	BQM-34F, RCS
184	117G	5500	VV	20	0	0	BQM-34F, Glint
185	119A	5500	VH	20	0	0	BQM-34F, RCS
186	119G	5500	VH	20	0	0	BQM-34F, Glint
187	121A	5500	HH	20	30	0	BQM-34F, RCS
188	121G	5500	HH	20	30	0	BQM-34F, Glint
189	125A	5500	VV	20	30	0	BQM-34F, RCS
190	125G	5500	VV	20	30	0	BQM-34F, Glint
191	123A	5500	VH	20	30	0	BQM-34F, RCS
192	123G	5500	VH	20	30	0	BQM-34F, Glint
193	146A	5500	HH	20	60	0	BQM-34F, RCS
194	146G	5500	HH	20	60	0	BQM-34F, Glint
195	148A	5500	VV	20	60	0	BQM-34F, RCS
196	148G	5500	VV	20	60	0	BQM-34F, Glint

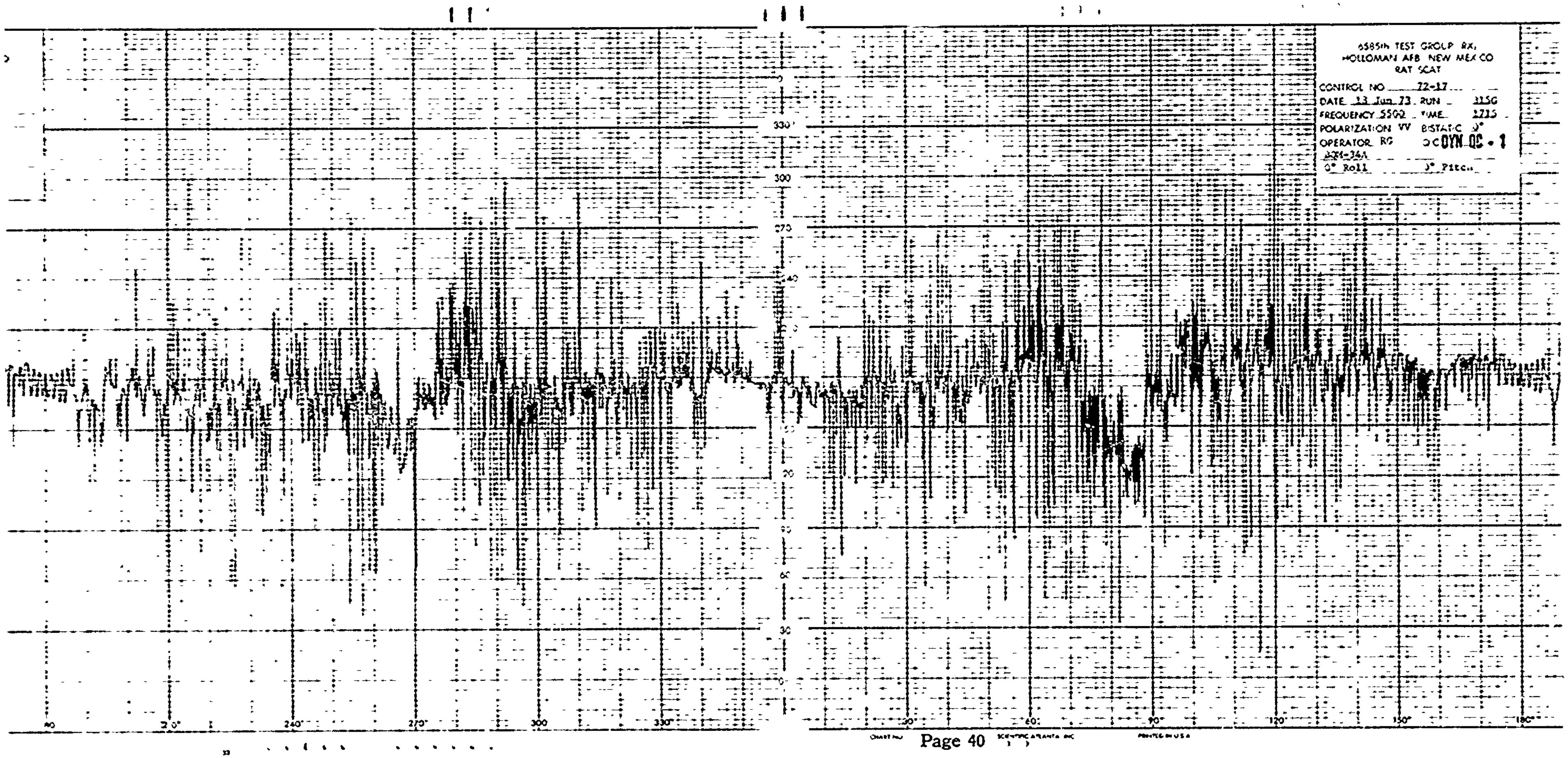
CONTROL NUMBER 72-17 Table I DATA PLOT INDEX Sheet 6

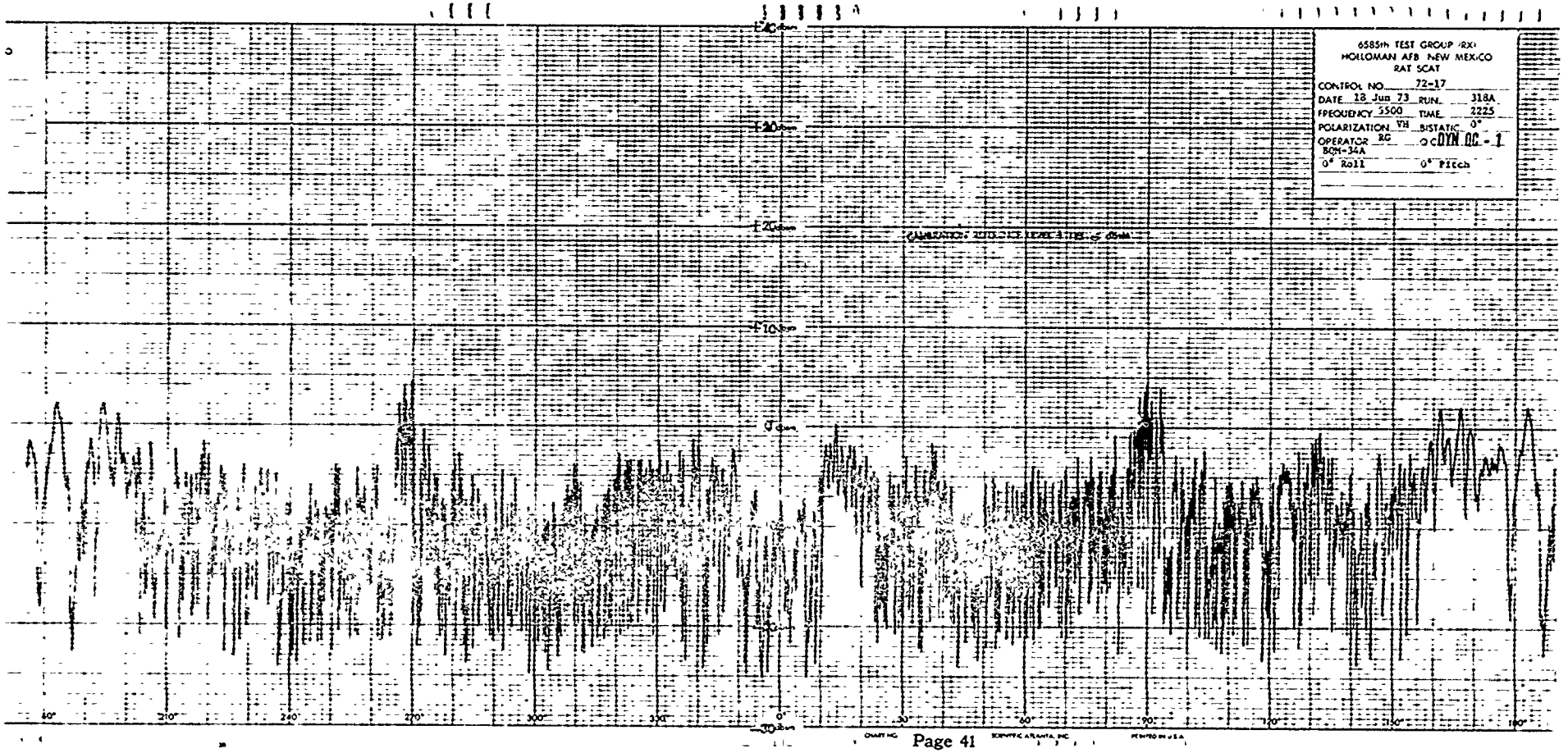
PAGE NO.	RUN	FREQ (MHz)	POLARIZATION	PITCH ANGLE	ROLL ANGLE	BISTATIC ANGLE	TARGET CONFIGURATION AND REMARKS
197	145A	5500	VH	20°	60°	0°	BQM-34F, RCS
198	145G	5500	VH	20	60	0	BQM-34F, Glint
199	150A	5500	HH	20	90	0	BQM-34F, RCS
200	150G	5500	HH	20	90	0	BQM-34F, Glint
201	154A	5500	VV	20	90	0	BQM-34F, RCS
202	154G	5500	VV	20	90	0	BQM-34F, Glint
203	152A	5500	VH	20	90	0	BQM-34F, RCS
204	152G	5500	VH	20	90	0	BQM-34F, Glint
205	159A	5500	HH	30	0	0	BQM-34F, RCS
206	159G	5500	HH	30	0	0	BQM-34F, Glint
207	163A	5500	VV	30	0	0	BQM-34F, RCS
208	163G	5500	VV	30	0	0	BQM-34F, Glint
209	161A	5500	VH	30	0	0	BQM-34F, RCS
210	161G	5500	VH	30	0	0	BQM-34F, Glint
211	179A	5500	HH	30	30	0	BQM-34F, RCS
212	179G	5500	HH	30	30	0	BQM-34F, Glint
213	182A	5500	VV	30	30	0	BQM-34F, RCS
214	182G	5500	VV	30	30	0	BQM-34F, Glint
215	180A	5500	VH	30	30	0	BQM-34F, RCS
216	180G	5500	VH	30	30	0	BQM-34F, Glint
217	166A	5500	HH	30	60	0	BQM-34F, RCS
218	166G	5500	HH	30	60	0	BQM-34F, Glint
219	170A	5500	VV	30	60	0	BQM-34F, RCS
220	170G	5500	VV	30	60	0	BQM-34F, Glint
221	168A	5500	VH	30	60	0	BQM-34F, RCS
222	168G	5500	VH	30	60	0	BQM-34F, Glint
223	176A	5500	HH	30	90	0	BQM-34F, RCS
224	176G	5500	HH	30	90	0	BQM-34F, Glint
225	172A	5500	VV	30	90	0	BQM-34F, RCS
226	172G	5500	VV	30	90	0	BQM-34F, Glint
227	174A	5500	VH	30	90	0	BQM-34F, RCS
228	174G	5500	VH	30	90	0	BQM-34F, Glint

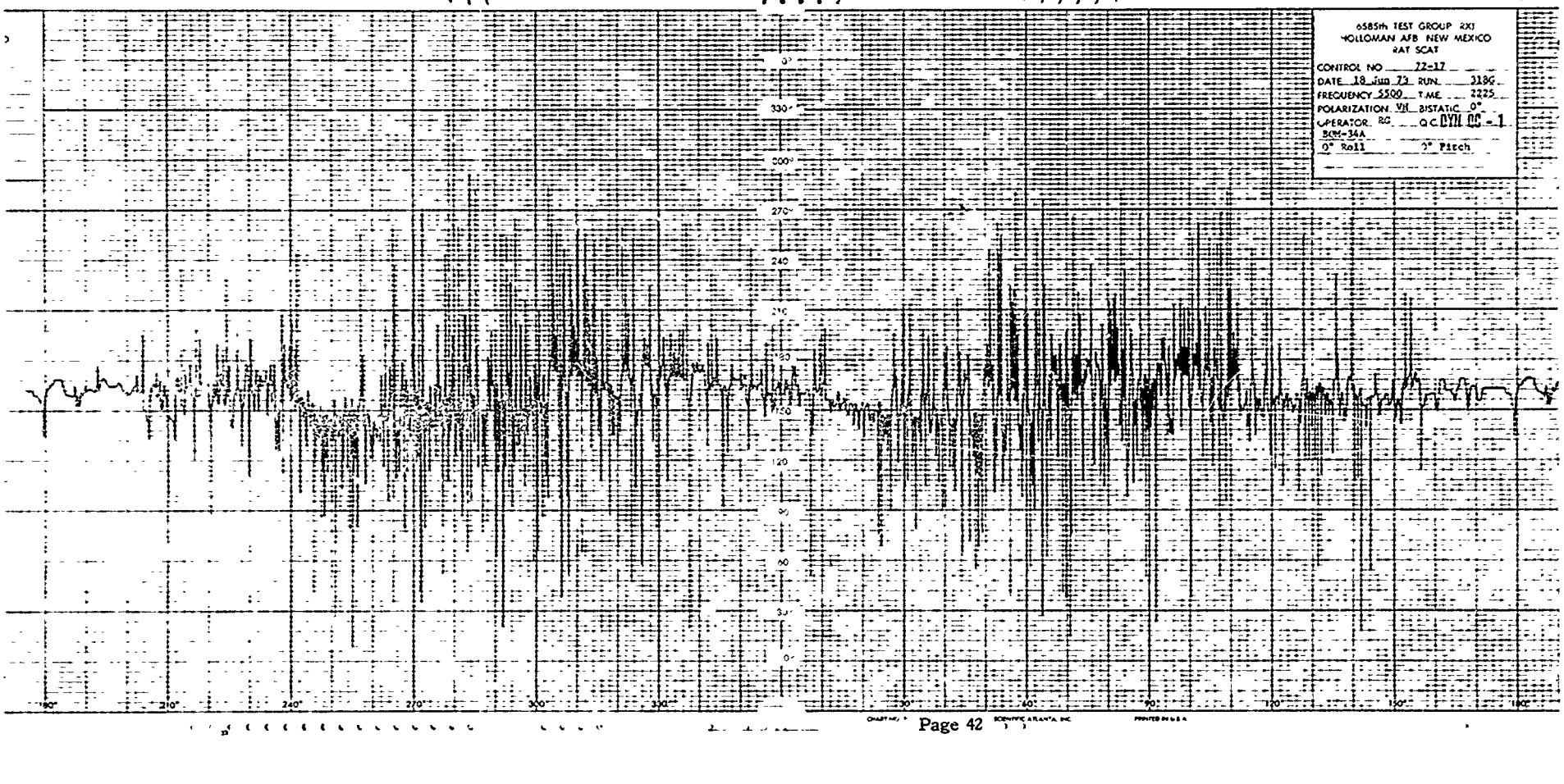

6585th TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
PAT SCAT
CONTROL NO. 72-17
DATE 18 Jun 73 RUN 313A
FREQUENCY 5500 TIME 1600
POLARIZATION RH BISTATIC 0°
OPERATOR RG
BQM-34A
0° Roll 0° Pitch
DYNACS - 1
+40dBm
+30dBm
+20dBm
+10dBm
0dBm
-10dBm
-20dBm
-30dBm
270°
240
270
300°
330°
0°
30°
60°
90°
120
150°
180°

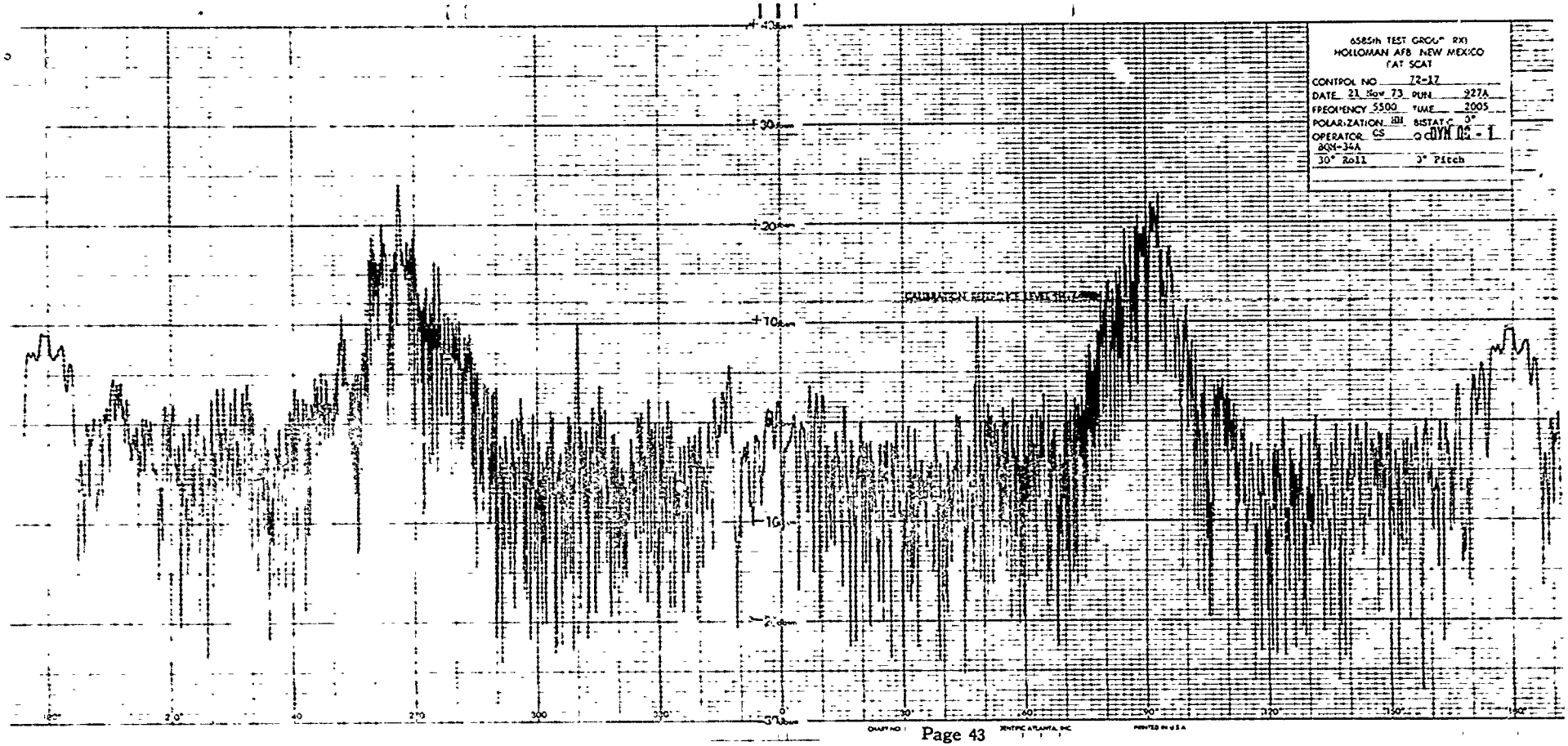

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO Z2-17
DATE 18 Jul 73 RUN 1135
FREQUENCY 5500 TIME 1600
POLARIZATION rid BISTATIC 0°
OPERATOR RG
80M-34A
3° Roll
3° Pitch
AYK AC - 1
360°
300°
270°
240°
210°
150°
120°
90°
60
30°
0°
210°
240
270°
300°
330°
30°
60
90°
120°
150°
180°

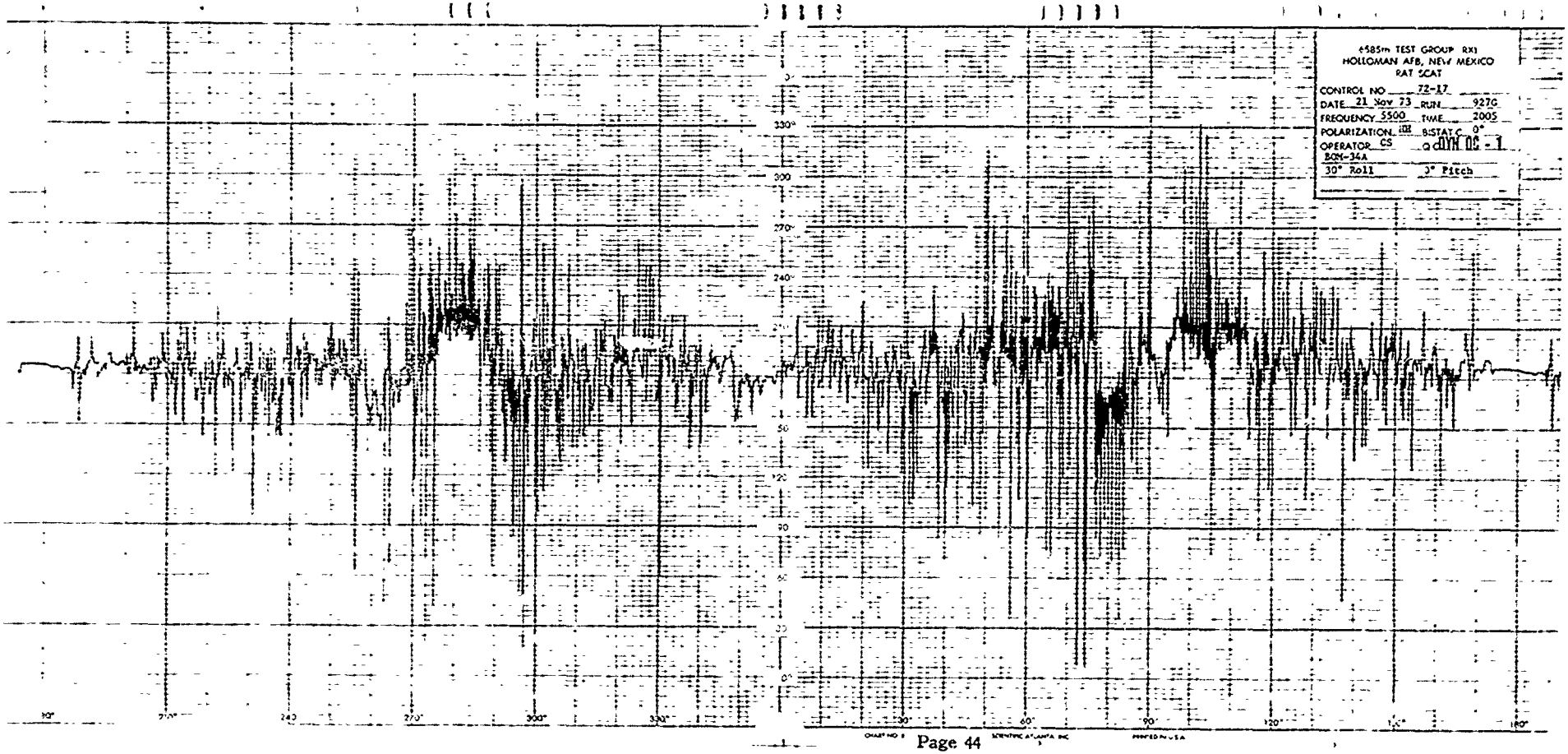

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO. 72-17
DATE 18 Jun 73 RUN 315A
FREQUENCY 5500 TIME 1715
POLARIZATION VV BISTATIC 0°
OPERATOR RG
30M-34A
0° Roll 0° Pitch
CALIBRATION REFERENCE
+30
+20
+10
0
-10
-30
240
270
300
330
0°
30
60°
90°
120°
150°

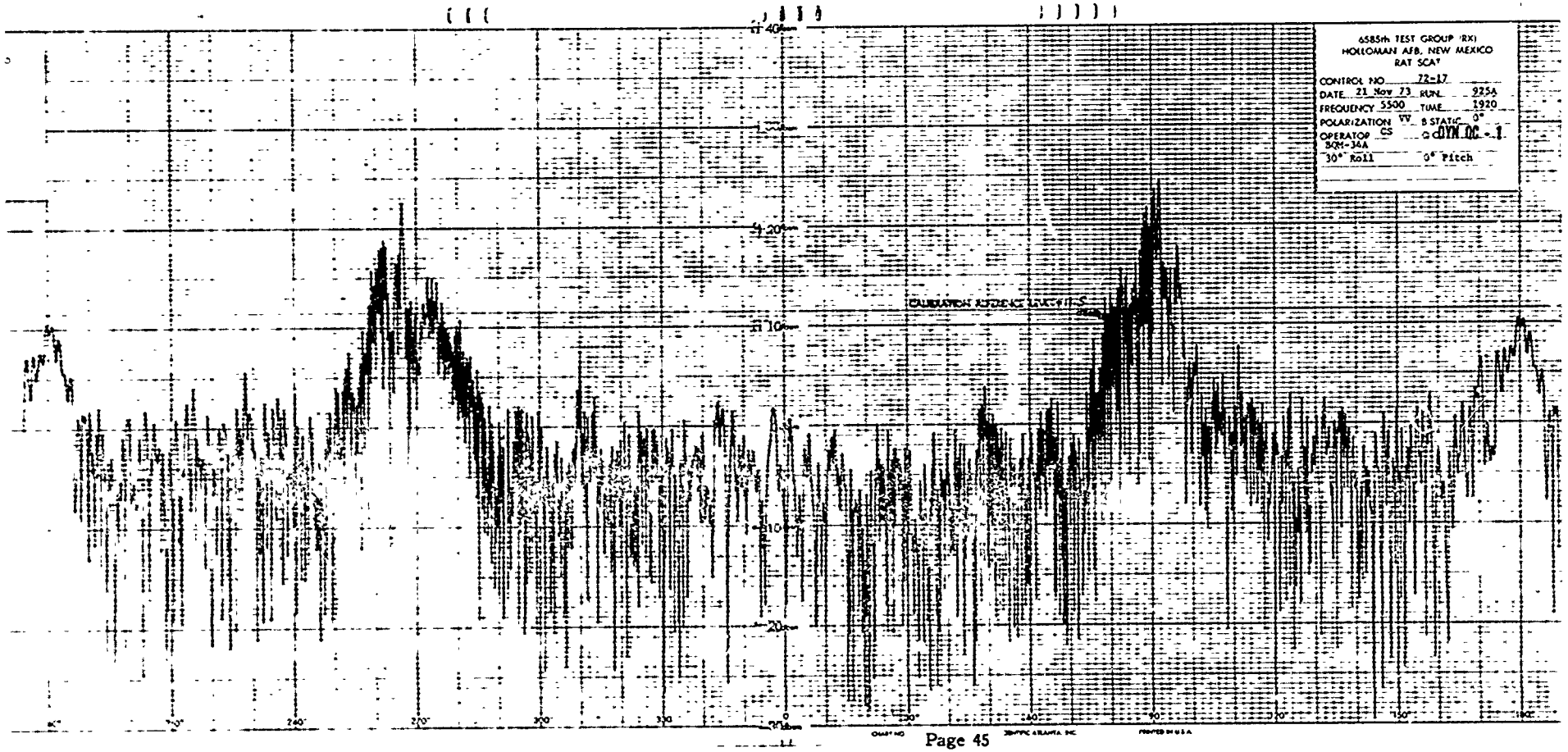

6585th TEST GROUP RX,
HOLLOMAN AFB NEW MEX CO
RAT SCAT
CONTROL NO 72-17
DATE 13 Jun 73 RUN 3156
FREQUENCY 5500 TIME 1715
POLARIZATION VV BISTATIC 0°
OPERATOR RG DCDYN QC-1
0° Roll 0° Pitch

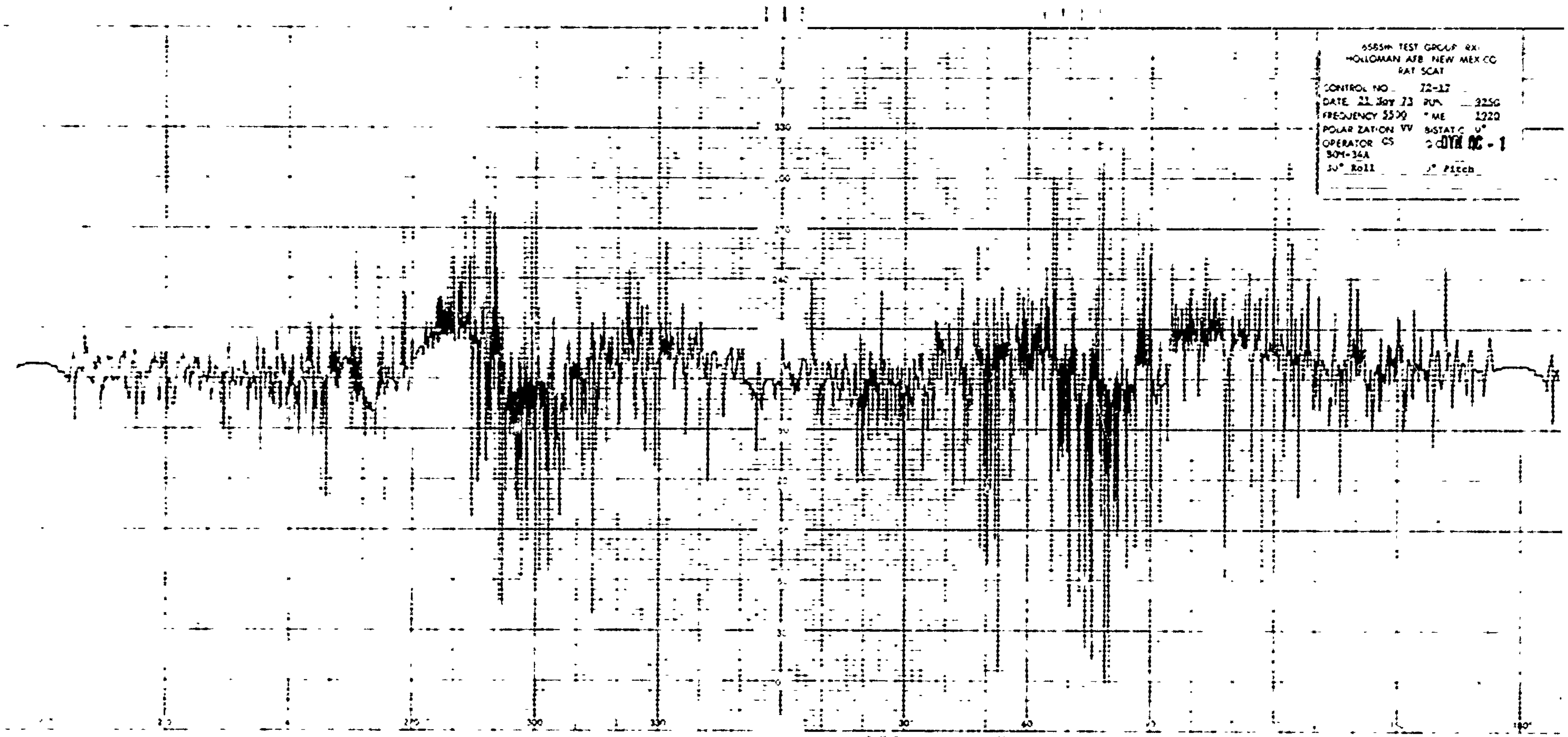

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO. 72-17
DATE 18 Jun 73 RUN 318A
FREQUENCY 5500 TIME 2225
POLARIZATION VH BISTATIC 0°
OPERATOR RG
BOM-34A
0° Roll 0° Pitch
DYN QC - 1
+40dBsm
+30
+20
+10
0
-10
-20
-30dBsm
60°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

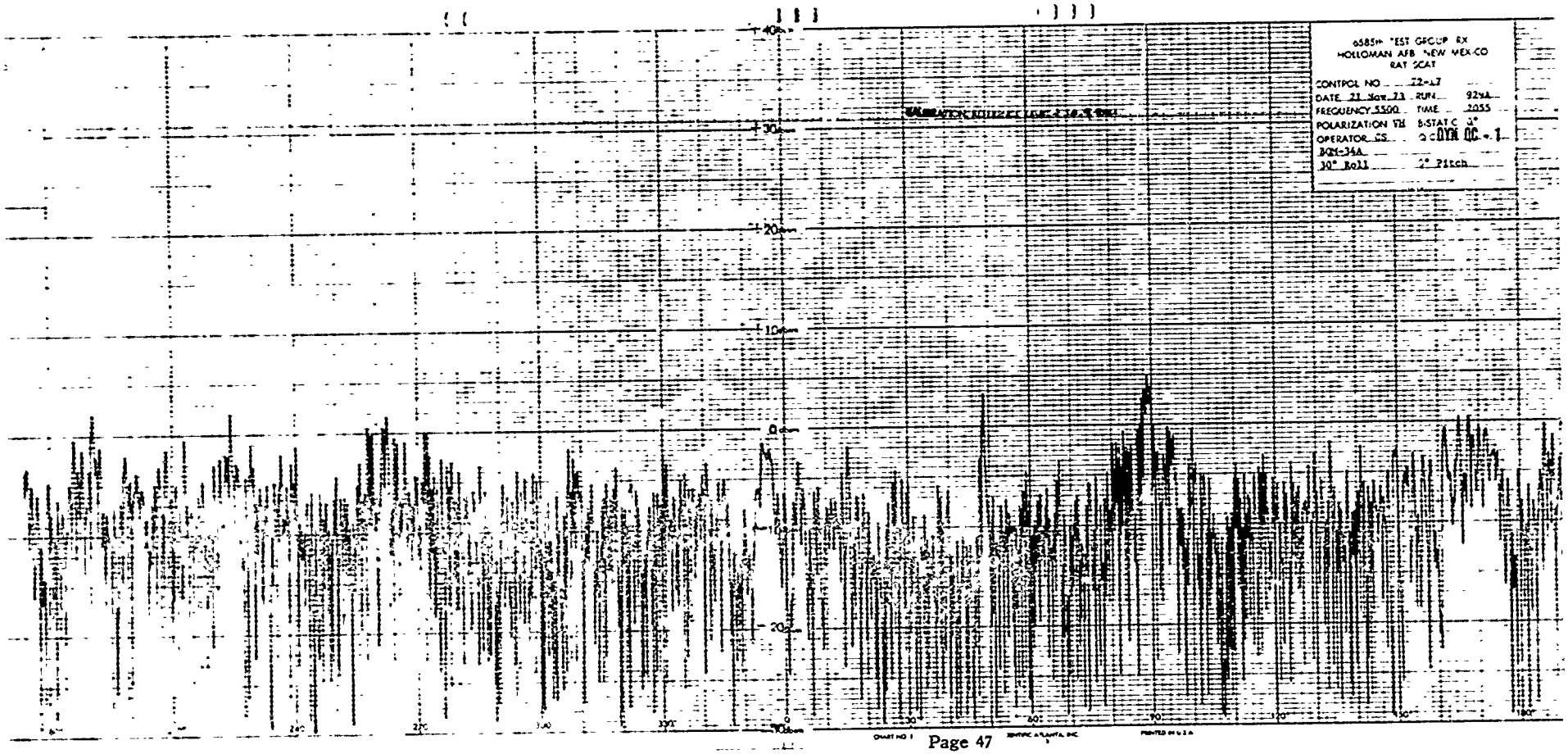

6585th TEST GROUP RXJ
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 18 Jun 73 RUN 3186
FREQUENCY 5500 TIME 2225
POLARIZATION VH BISTATIC 0°
OPERATOR RG QC DYN 00 - 1
BCM-34A
0° Roll 0° Pitch
0°
330°
300°
270°
240°
210°
180°
150°
120°
90°
60°
30°
0°
210°
240°
270°
300°
330°
30°
60°
90°
120°
150°
180°

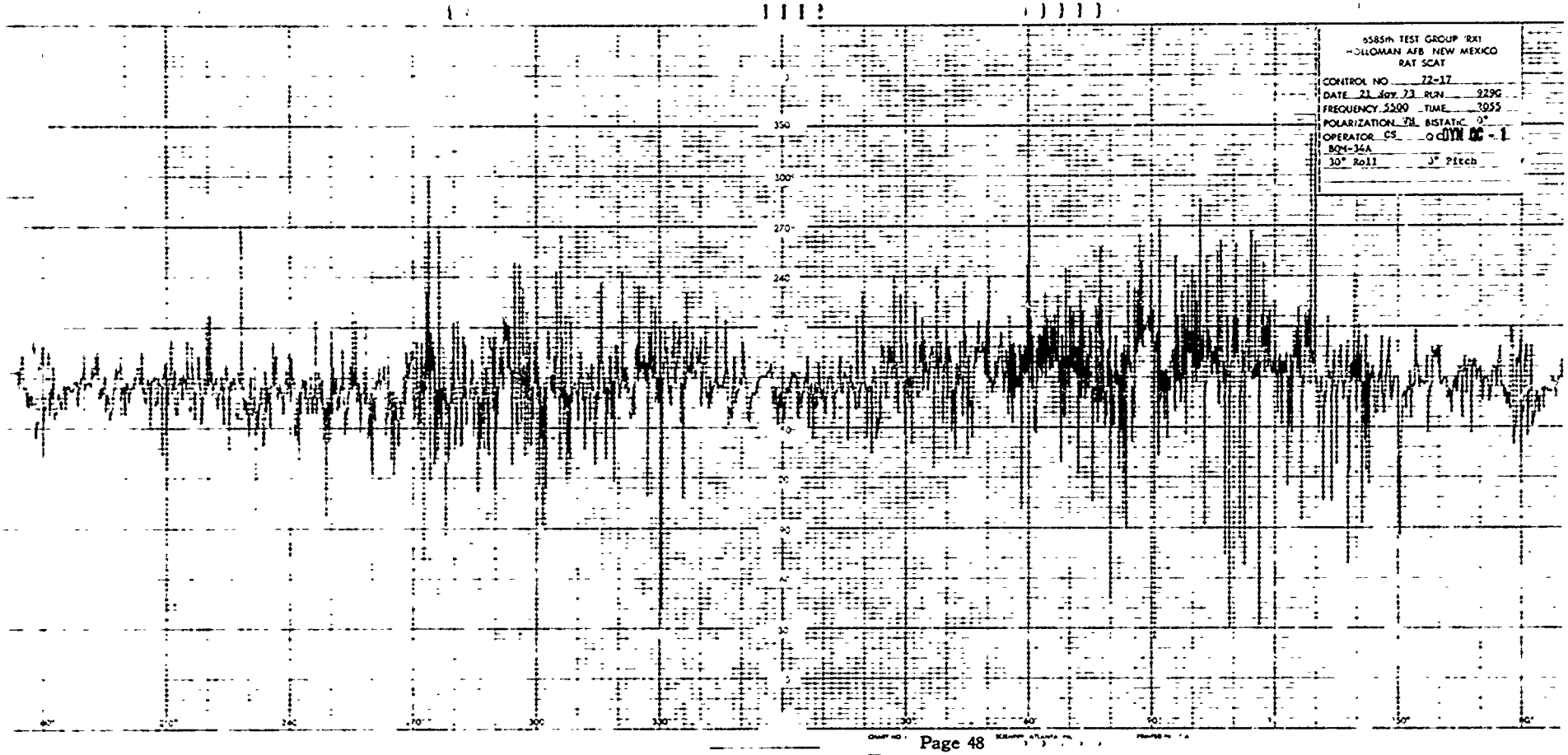

6585th TEST GROUP RKI
HOLLOMAN AFB NEW MEXICO
FAT SCAT
CONTROL NO 72-17
DATE 21 Nov 73 RUN 227A
FREQUENCY 5500 TUNE 2005
POLARIZATION HH BISTAT C 0°
OPERATOR GS
80M-34A
30° Roll 5° Pitch
+30
+20
+10
0
-10
-20
-30
10°
20°
40
270
300
330
0°
30°
60°
90°
270
330
360

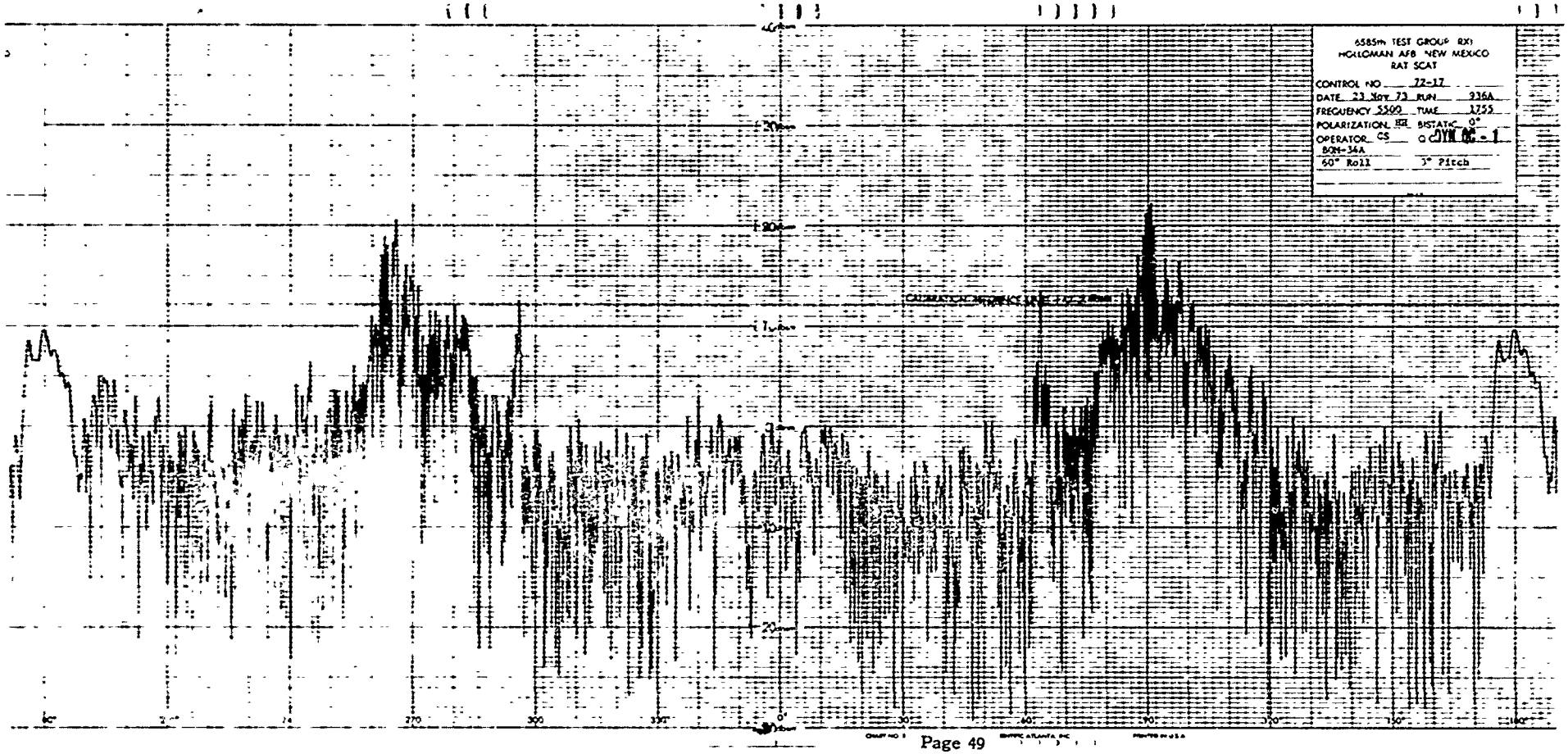

4585th TEST GROUP RXI
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 21 Nov 73 RUN 927G
FREQUENCY 3500 TIME 2005
POLARIZATION HH BISTAT C 0°
OPERATOR CS
BDM-34A
30° Roll
3° Pitch
330°
300°
270°
240°
90°
60°
30°
0°
90°
120°
150°
180°

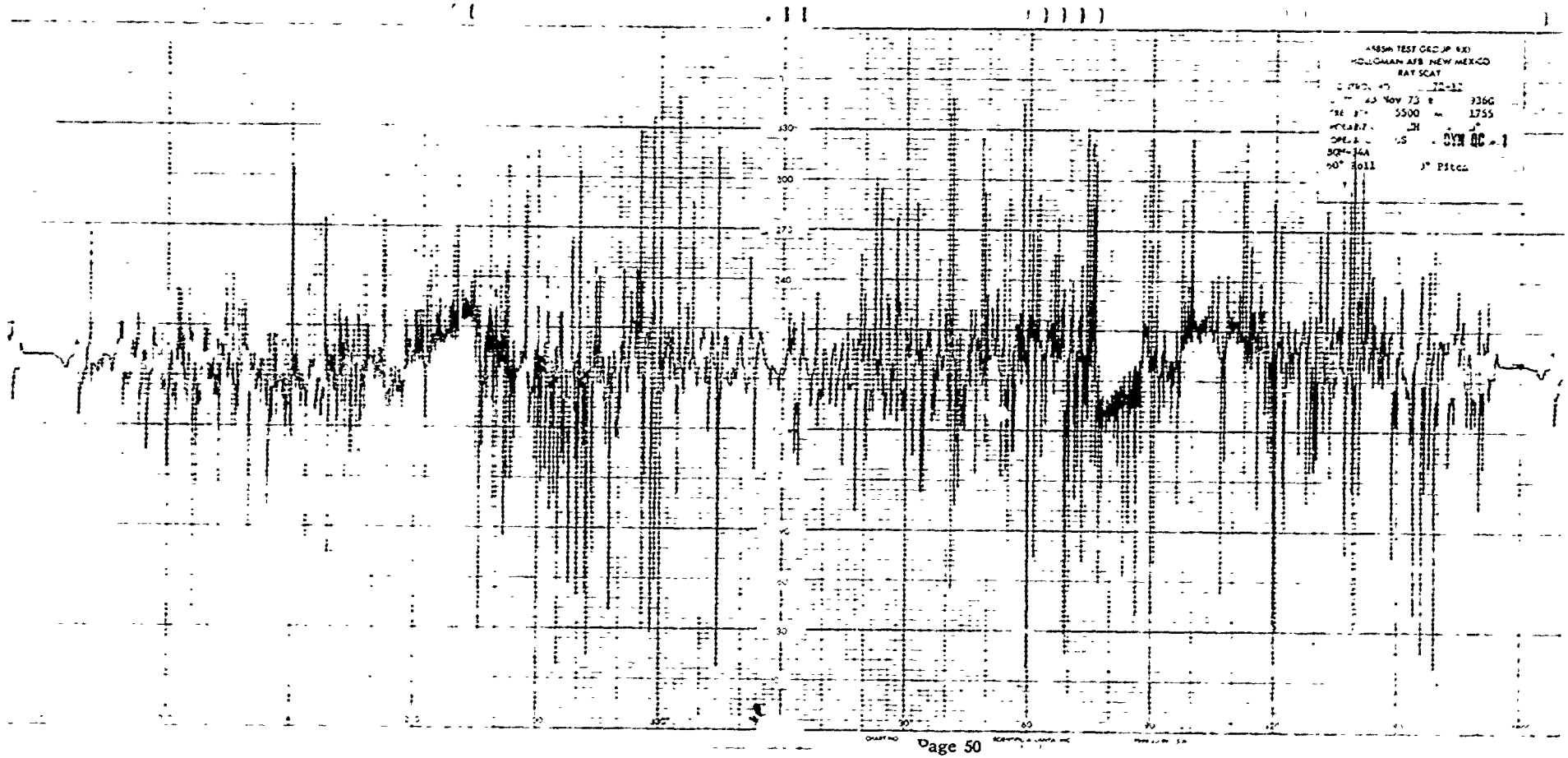

6585th TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO. 72-17
DATE 21 Nov 73 RUN 9256
FREQUENCY 5500 TIME 1920
POLARIZATION VV B STATIC 0°
OPERATOR CS
SQM-34A
30° Roll 0° Pitch
DYN QC - 1
40
30
20
10
0
CALIBRATION REFERENCE LEVEL
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

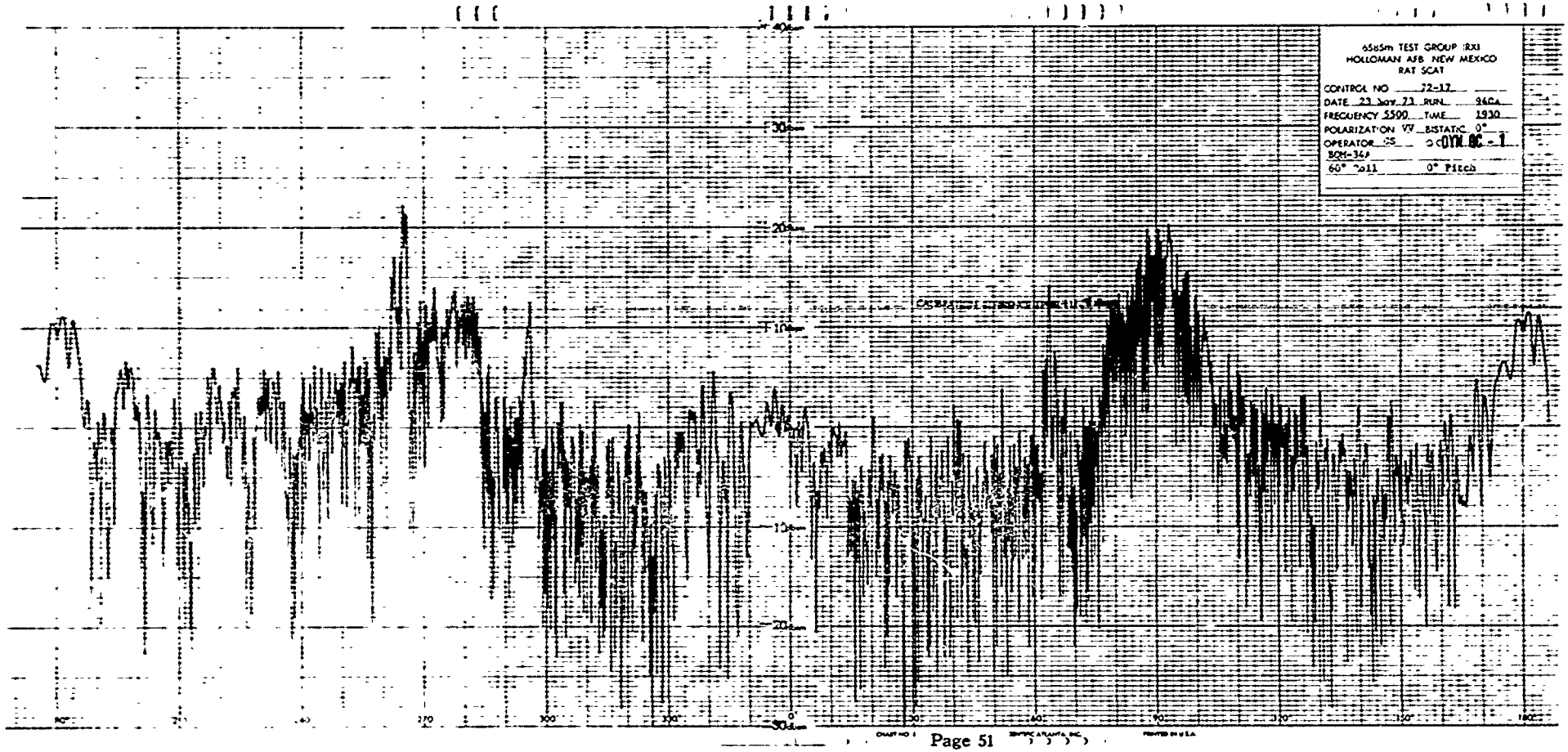

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEX CO
RAT SCAT
CONTROL NO. 72-17
DATE 21 Nov 73 RUN 3256
FREQUENCY 5500 TIME 1220
POLARIZATION VV BISTATIC 0°
OPERATOR CS DYN OC - 1
BQM-34A
30° Roll 0° Pitch
300
330
30°
60
180°

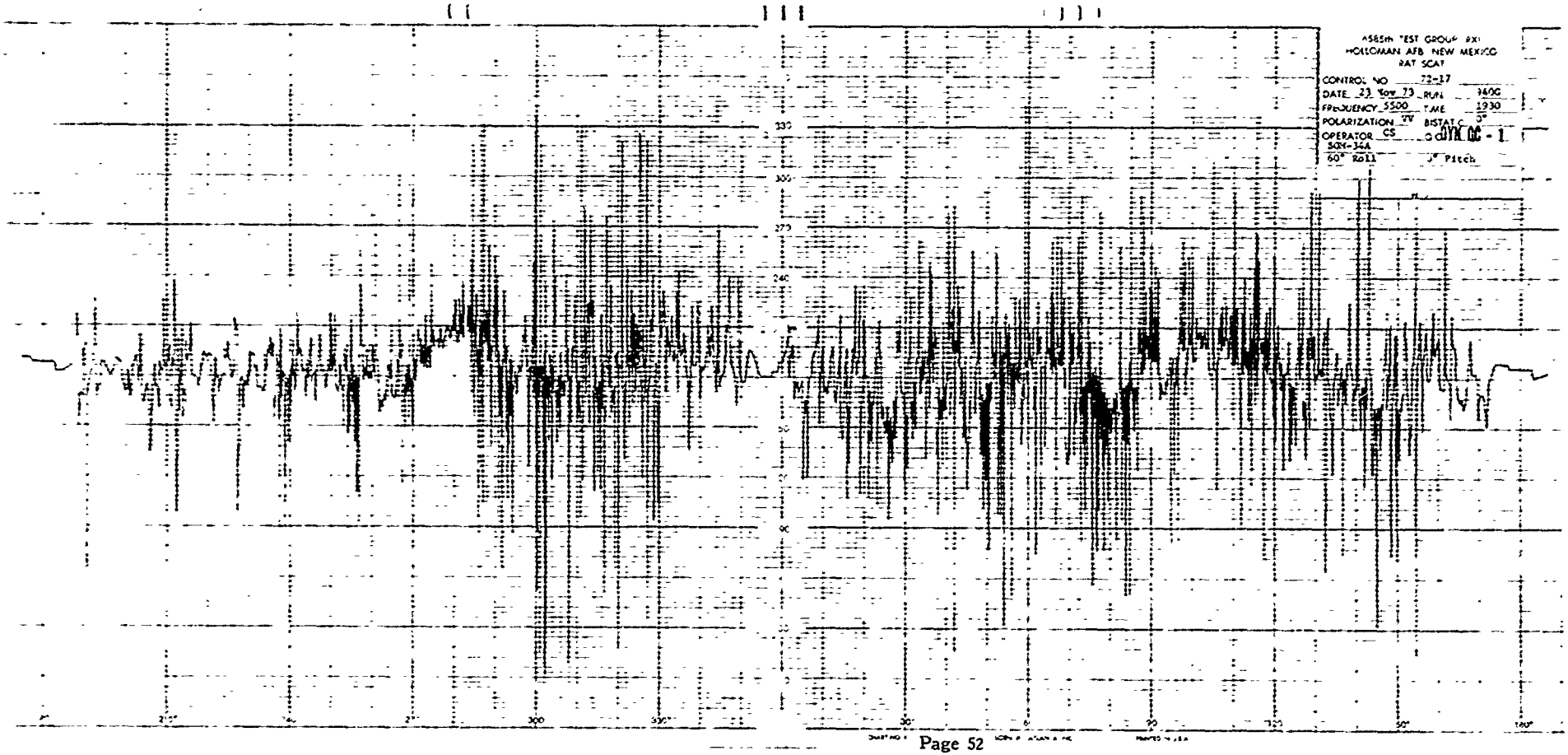

6585th TEST GROUP RX
HOLLOMAN AFB NEW MEX-CO
RAT SCAT
CONTROL NO 22-17
DATE 21 Nov 73 RUN 92nA
FREQUENCY 5500 TIME 2055
POLARIZATION VH BI-STAT C 0°
OPERATOR CS
BGN-36A
30° Roll 2° Pitch
40db
30db
20db
10db
0db
-10db
30°
60°
90°
120°
150°
180°
210°
240°
270°
300°
330°

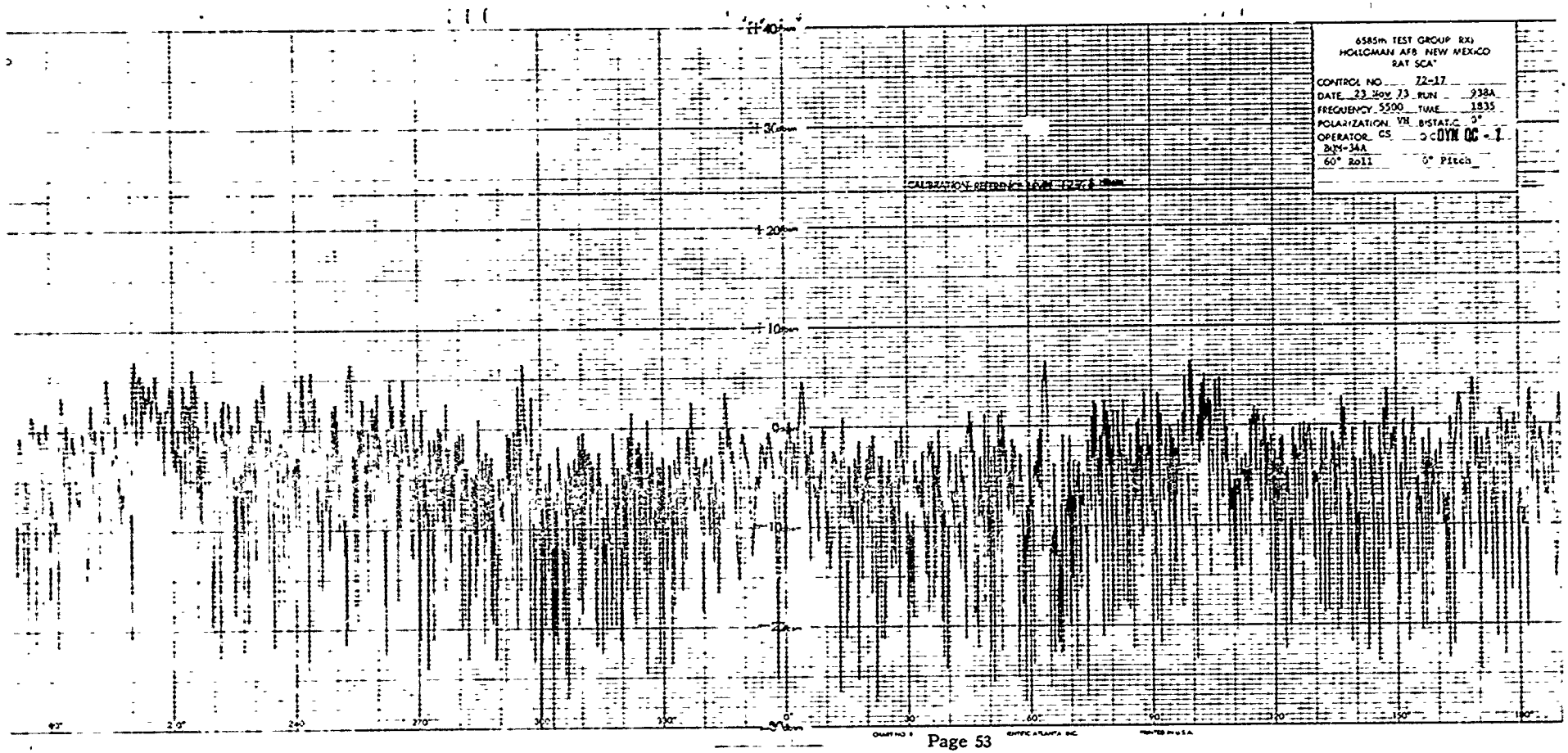

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 21 Nov 73 RUN 929G
FREQUENCY 5500 TIME 1955
POLARIZATION VH BISTATIC 0°
OPERATOR CS QDYN RC - 1
BQM-34A
30° Roll 3° Pitch
350
300
270
240
90
60
30
0
330
30
60
90

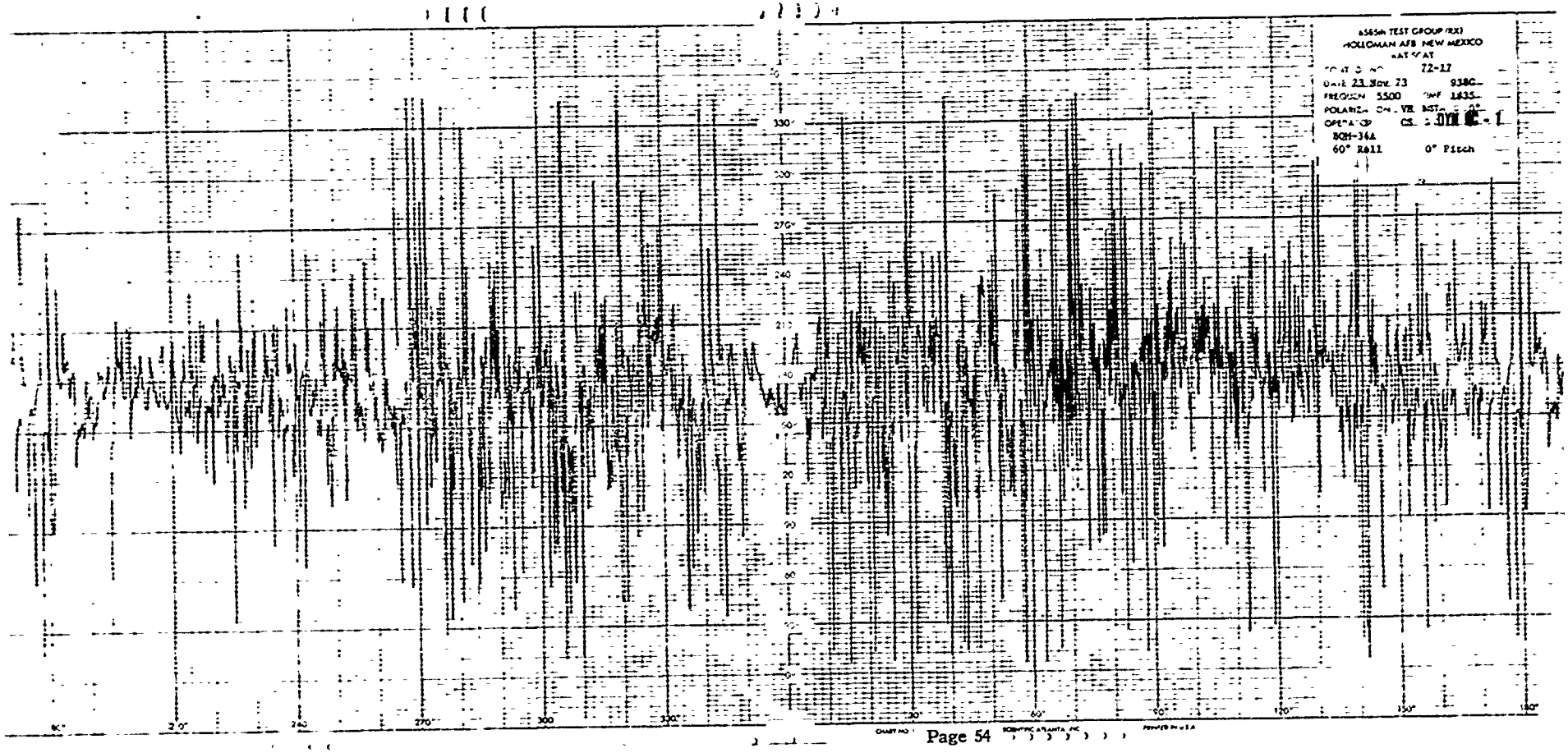

6585m TEST GROUP RX1
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 23 Nov 73 RUN 936A
FREQUENCY 5500 TIME 1755
POLARIZATION HH BISTATIC 0°
OPERATOR CS
BOM-34A
60° Roll
3° Pitch
270
300
0°
30
60
90
120
150
180

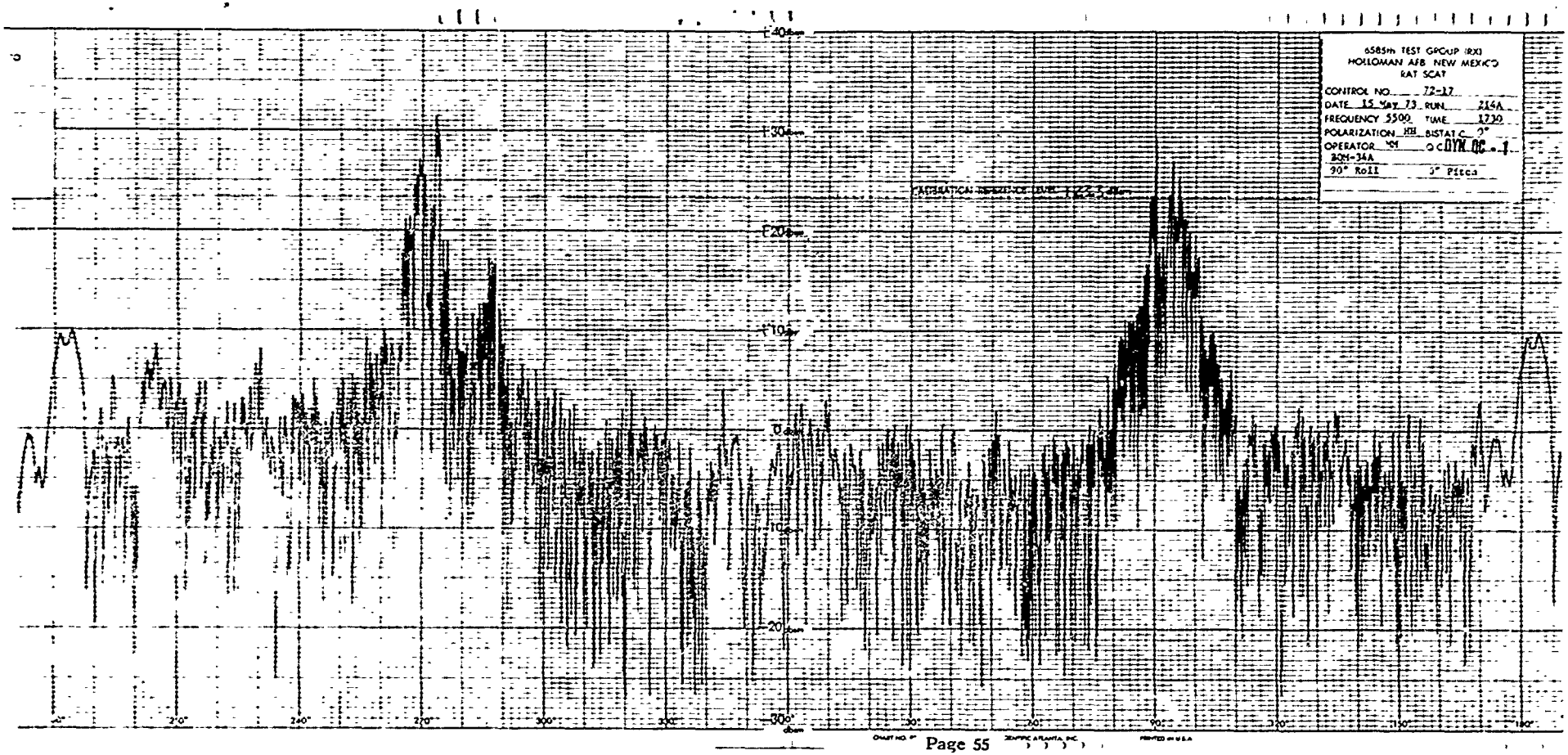

HOLLOMAN AFB NEW MEXICO
RAT SCAT
330
300
270
240
30
60
90

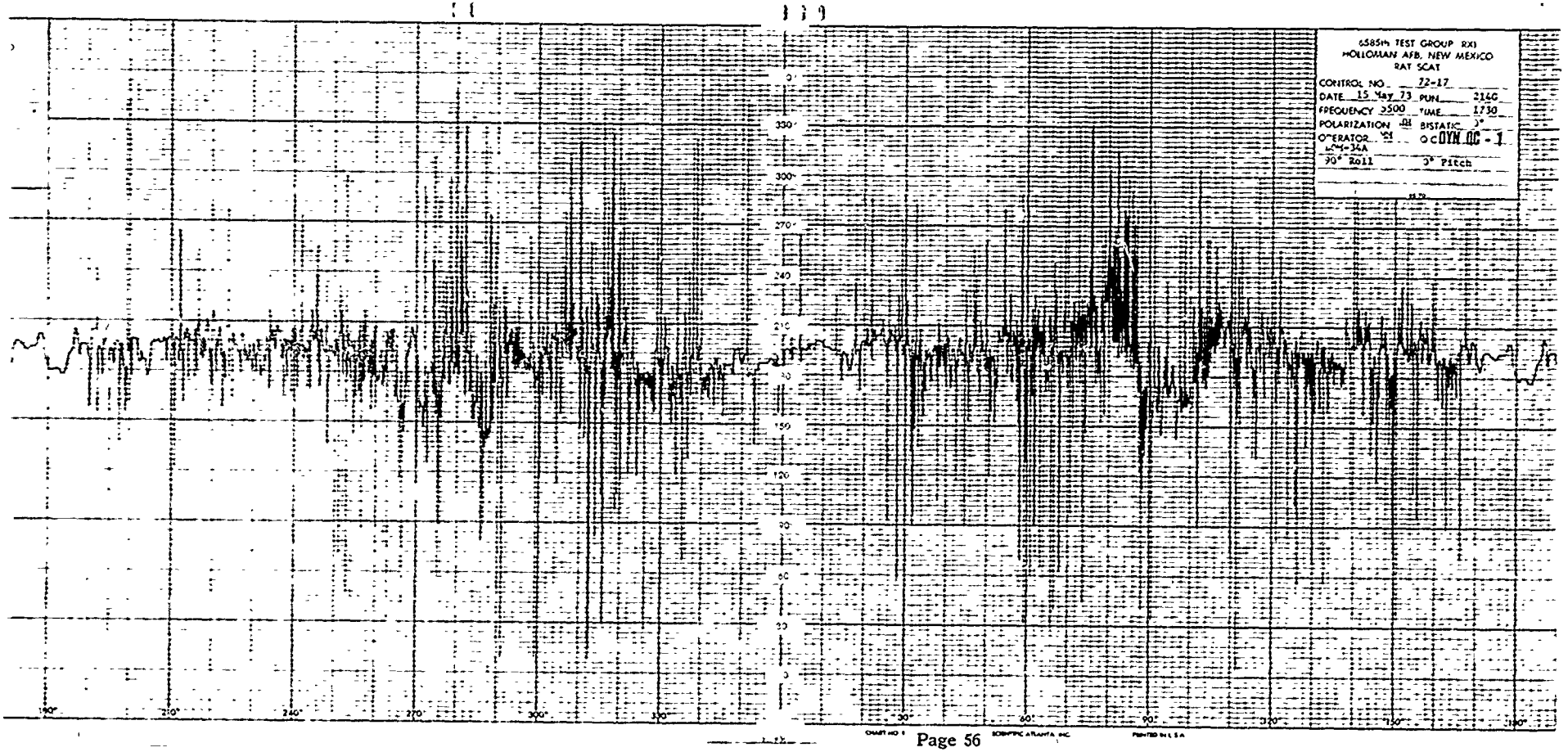

6585m TEST GROUP IRXI
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 23 Nov 73 RUN 946A
FREQUENCY 5500 TIME 1930
POLARIZATION VV BISTATIC 0°
OPERATOR DS
BOM-369
60° Roll 0° Pitch
40dBsm
30dBsm
20dBsm
10dBsm
0dBsm
-10dBsm
-20dBsm
-30dBsm

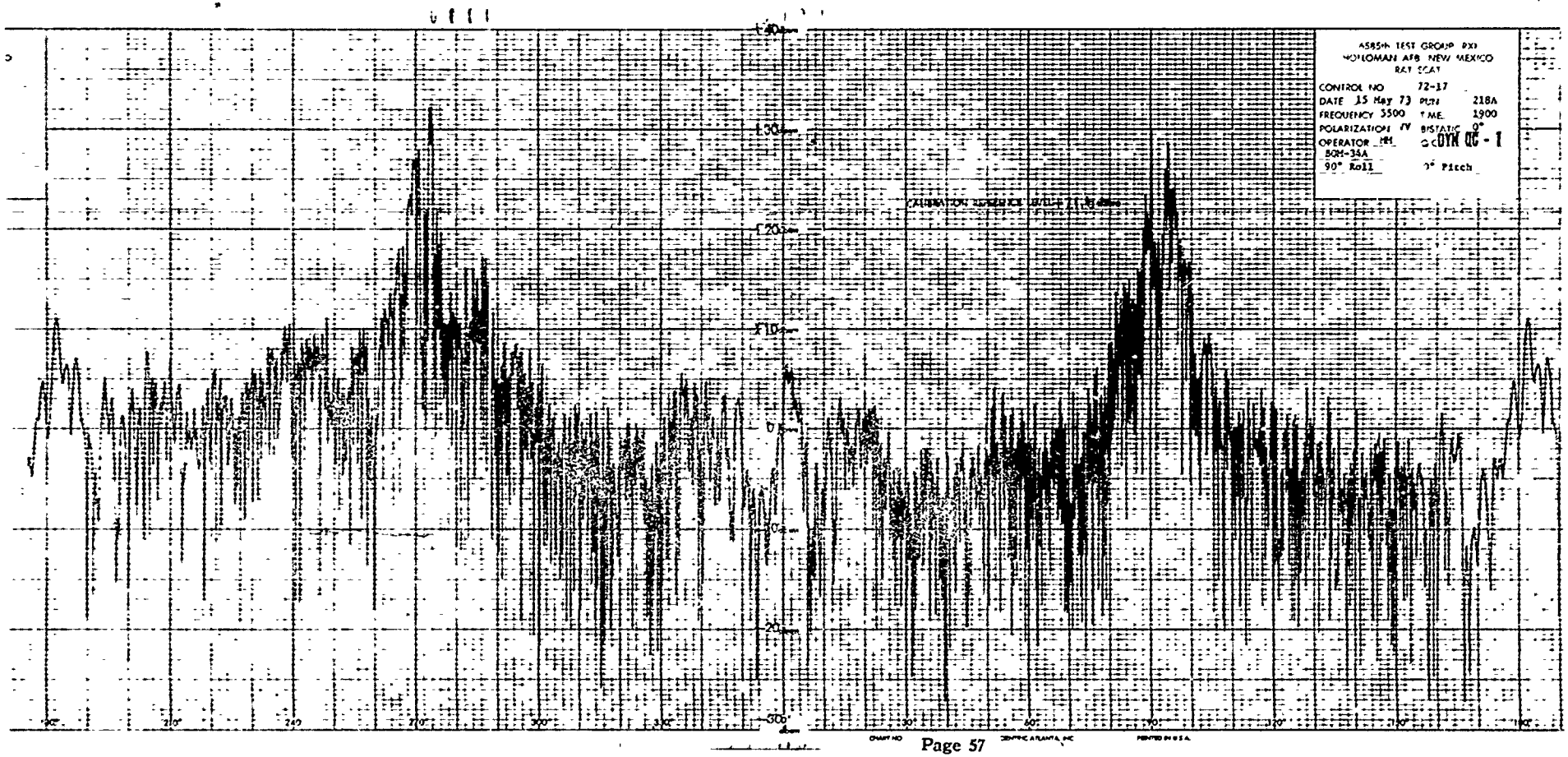

4585th TEST GROUP PKI
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-37
DATE 23 Nov 73 RUN 1406
FREQUENCY 5500 TIME 1930
POLARIZATION VV BISTAT C 0°
OPERATOR CS
30N-36A
60° Roll 0° Pitch
AVG CC - 1

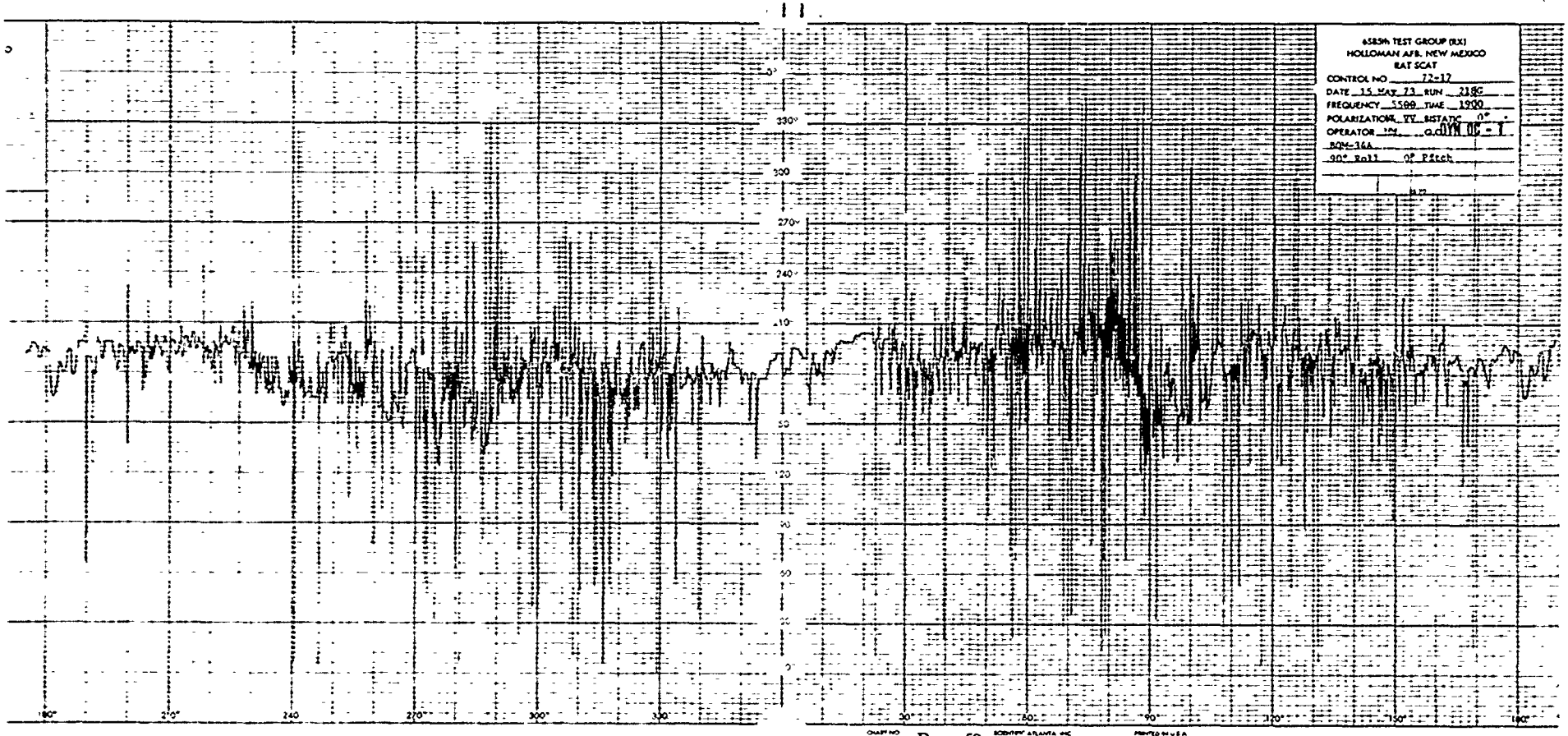

6585th TEST GROUP RXJ
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 23 Nov 73 RUN 938A
FREQUENCY 5500 TIME 1835
POLARIZATION VH BISTAT.C 0°
OPERATOR GS
DYN QC - 1
BOM-34A
60° Roll
0° Pitch
CALIBRATION REFERENCE LEVEL (127.5 mm)
40mm
30mm
20mm
10mm
0mm
10
20mm
0°
30°
60°
90°
120°
150°
180°

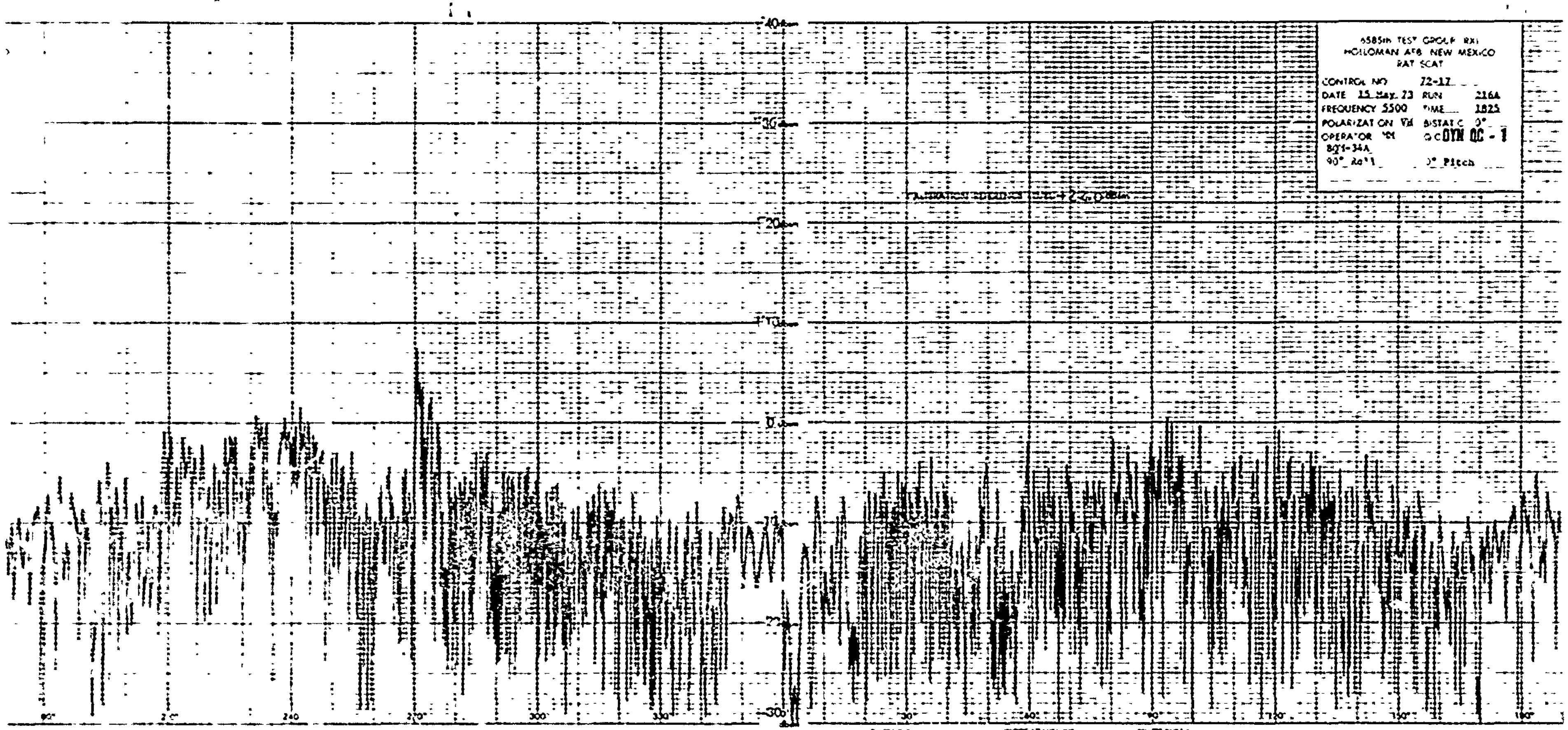

6565th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
72-17
Date 23 Nov 73
FREQUENCY 5500
60° Roll
0° Pitch
330°
300°
270°
240°
210°
180°
150°
120°
90°
60°
30°

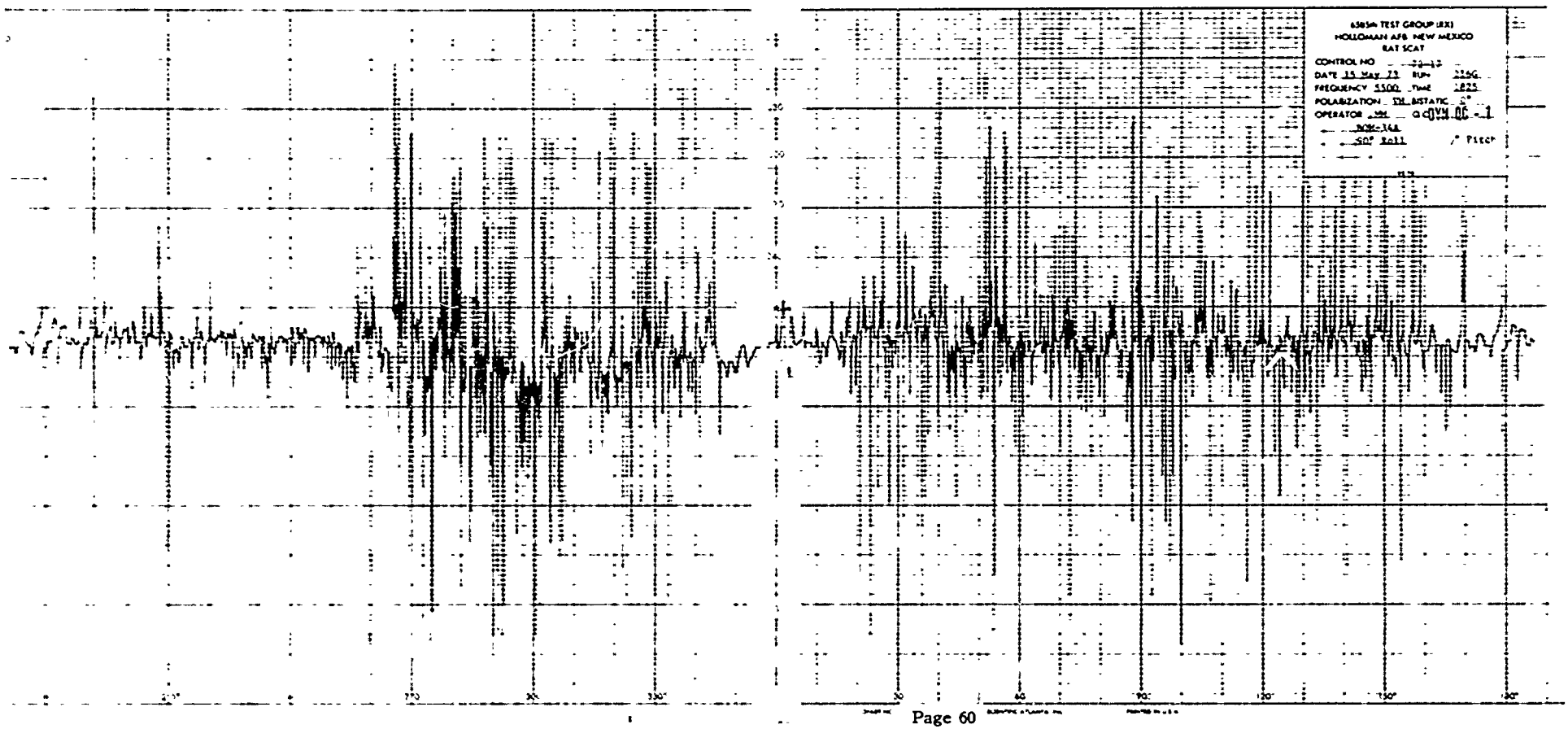

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO. 72-17
DATE 15 May 73 RUN 214A
FREQUENCY 5500 TIME 1730
POLARIZATION HH BISTAT C 0°
OPERATOR [illegible] OC DYK OC - 1
BQM-34A
90° Roll 5° Pitch
+40
+30
+20
+10
0
-10
-20
-30
dBsm
0°
30°
90°
150°
180°
210°
240°
270°
300°
330°

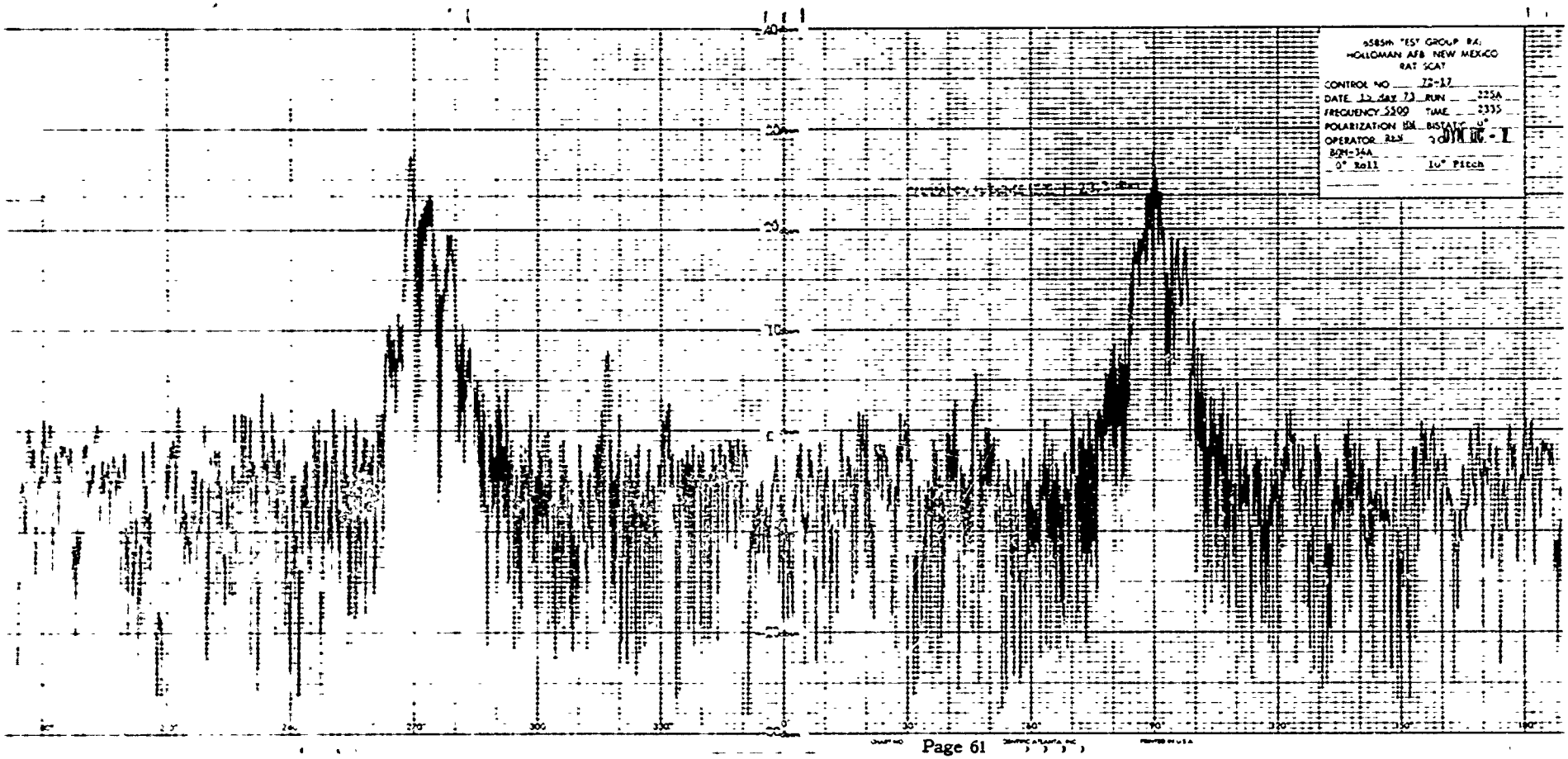

6585th TEST GROUP RXI
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO. 72-17
DATE 15 May 73 RUN 2146
FREQUENCY 9500 TIME 1730
POLARIZATION HH BISTATIC 3°
OPERATOR VS
NOSE-34A
90° Roll 3° Pitch
OCOYN OC - 1
330°
300°
270°
240°
210°
180°
150°
120°
90°
60°
30°
0°
180°
210°
240°
270°
300°
330°
30°
60°
90°
120°
150°
180°

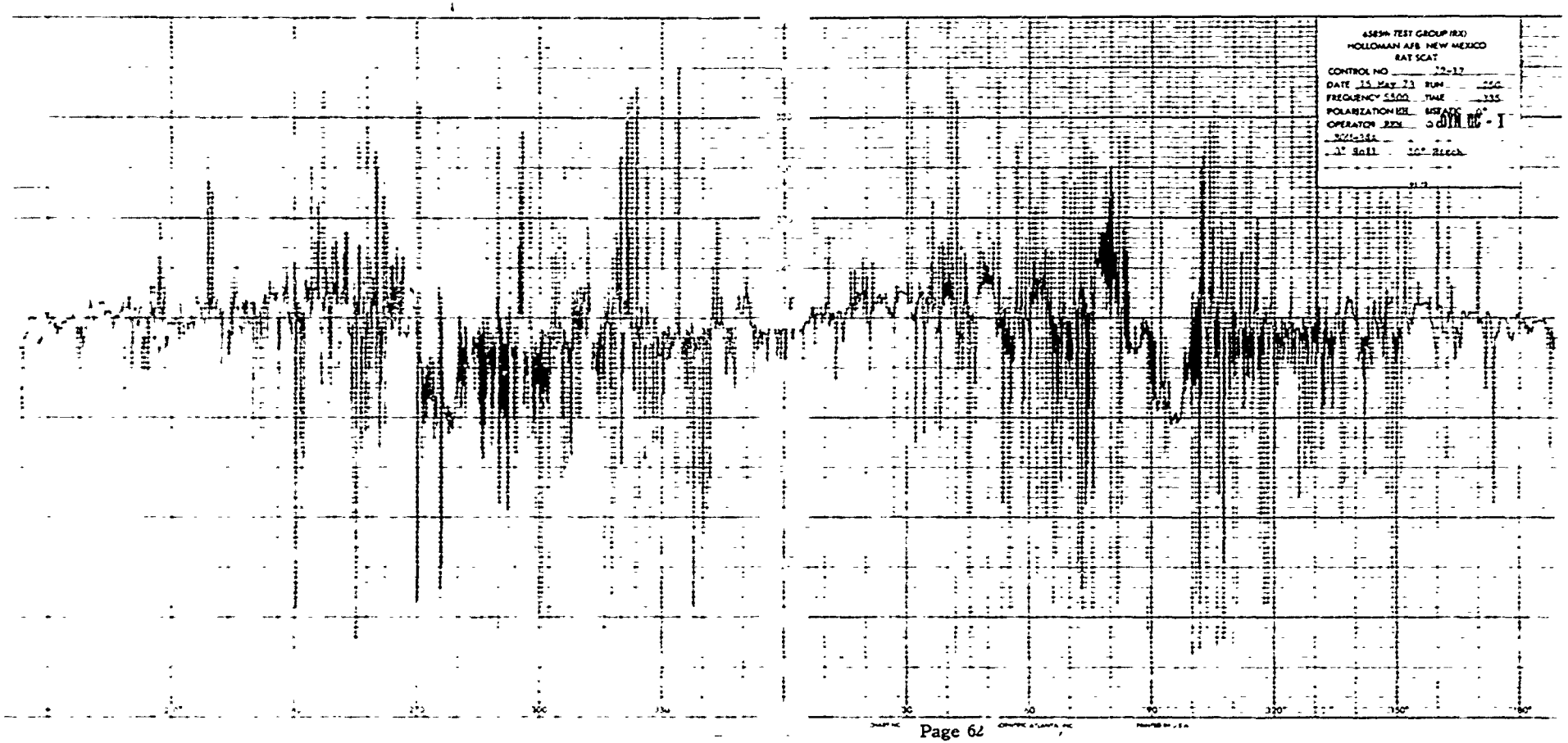

4585th TEST GROUP PKI
HOLLOMAN AFB NEW MEXICO
RAY SCAT
CONTROL NO 72-17
DATE 15 May 73 PLT# 218A
FREQUENCY 5500 TIME 1900
POLARIZATION VV BISTATIC 0°
OPERATOR MH
90° Roll 0° Pitch
+40dBsm
+30dBsm
+20dBsm
+10dBsm
0dBsm
-10dBsm
-20dBsm
-30dBsm
210°
240
270°
300°
330°
30°
60°
90°
120°
150°
180°

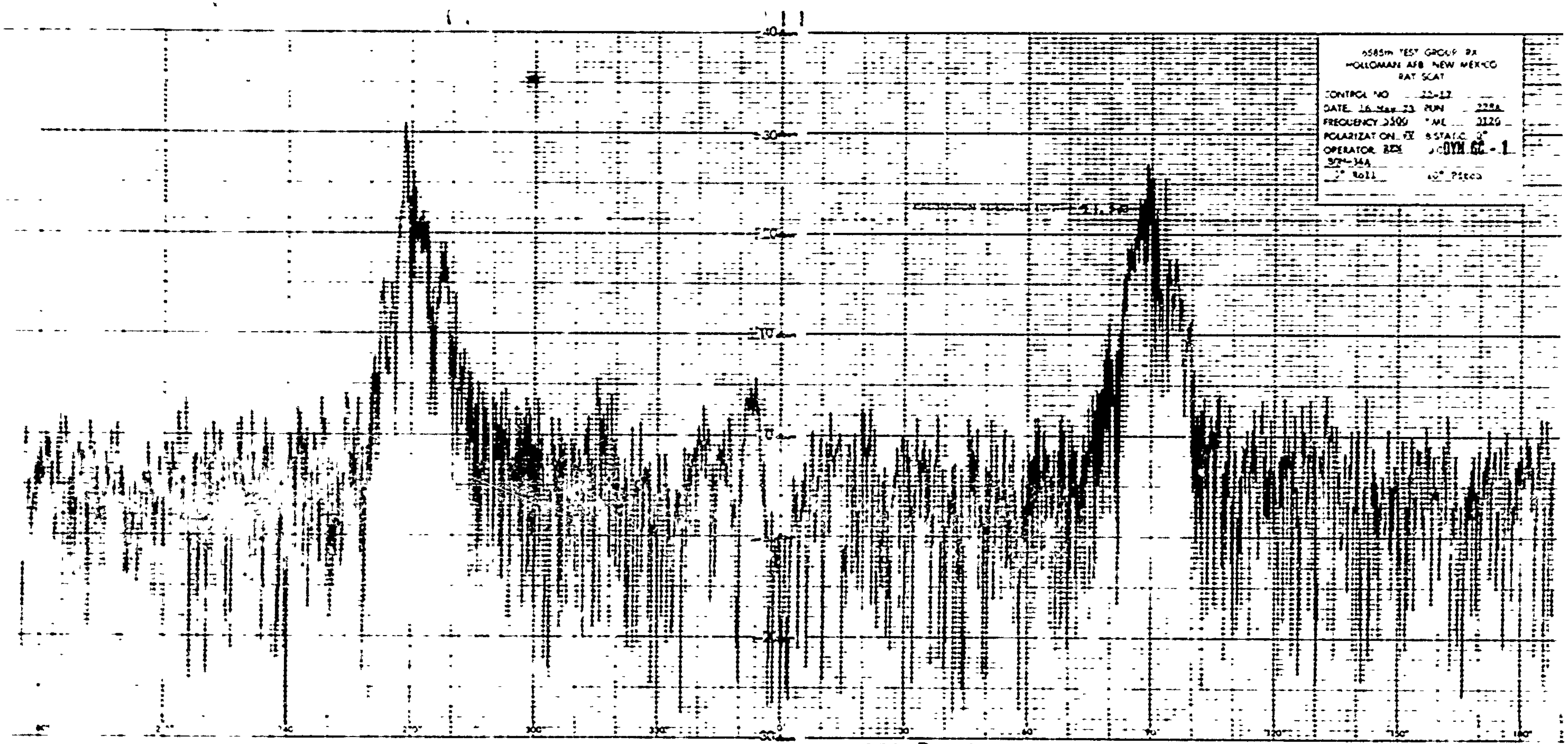

6585th TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 15 MAY 73 RUN 2186
FREQUENCY 5500 TIME 1900
POLARIZATION VV BISTATIC 0°
OPERATOR [illegible]
BQM-34A
90° Roll 0° Pitch
330°
300°
270°
240°
210°
180°
150°
120°
90°
60°
30°
0°
180°
210°
240
270°
300°
330
30°
60°
90°
120°
150°
180°

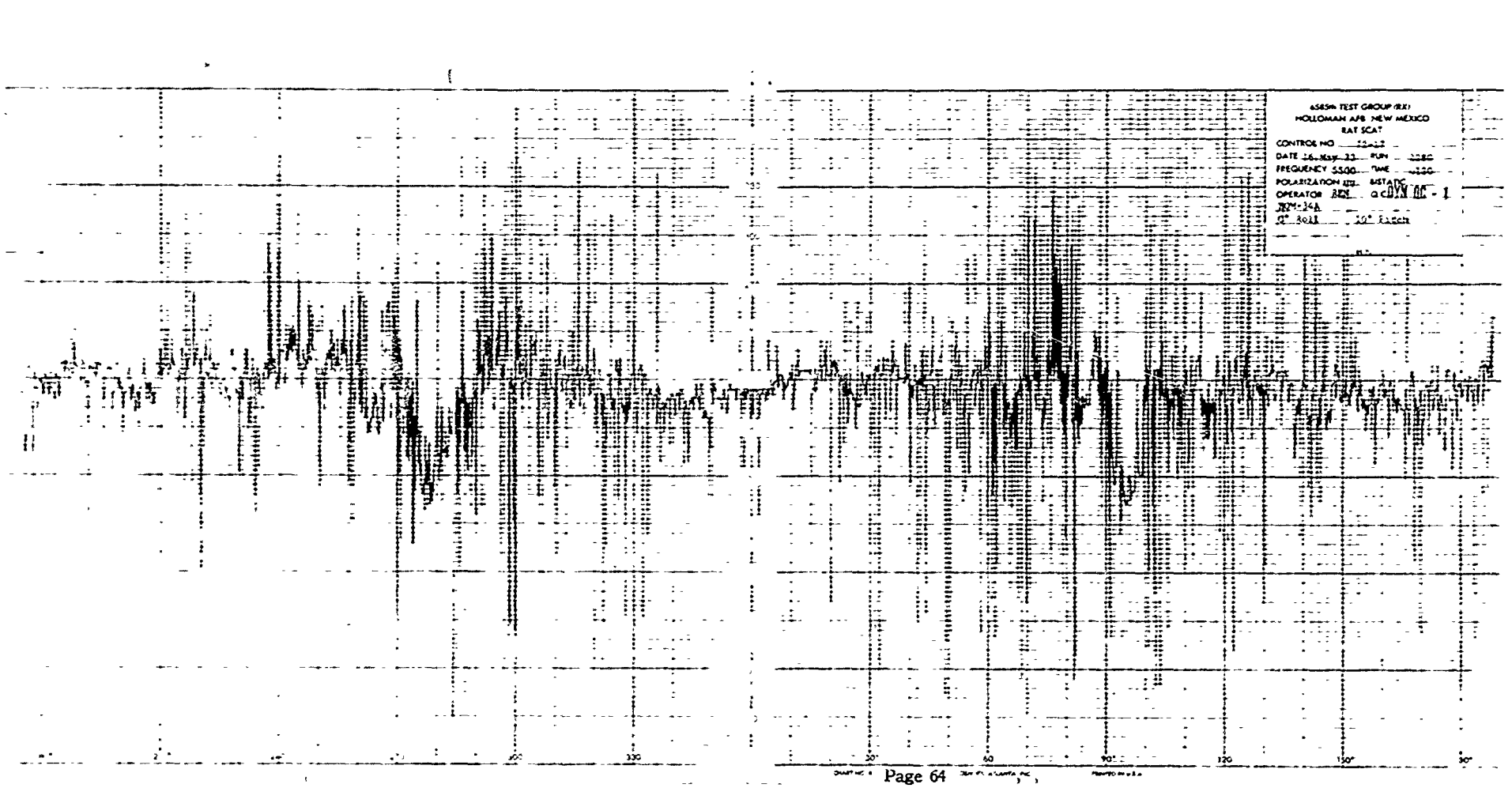

6585th TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 15 May 73 RUN 216A
FREQUENCY 5500 TIME 1825
POLARIZATION VH BISTATIC 0°
OPERATOR
BQM-34A
90° Roll 0° Pitch
40
30
20
10
0
-10
-20
-30
90°
240
270°
300
330
30°
60°
90°
120
150°
180°

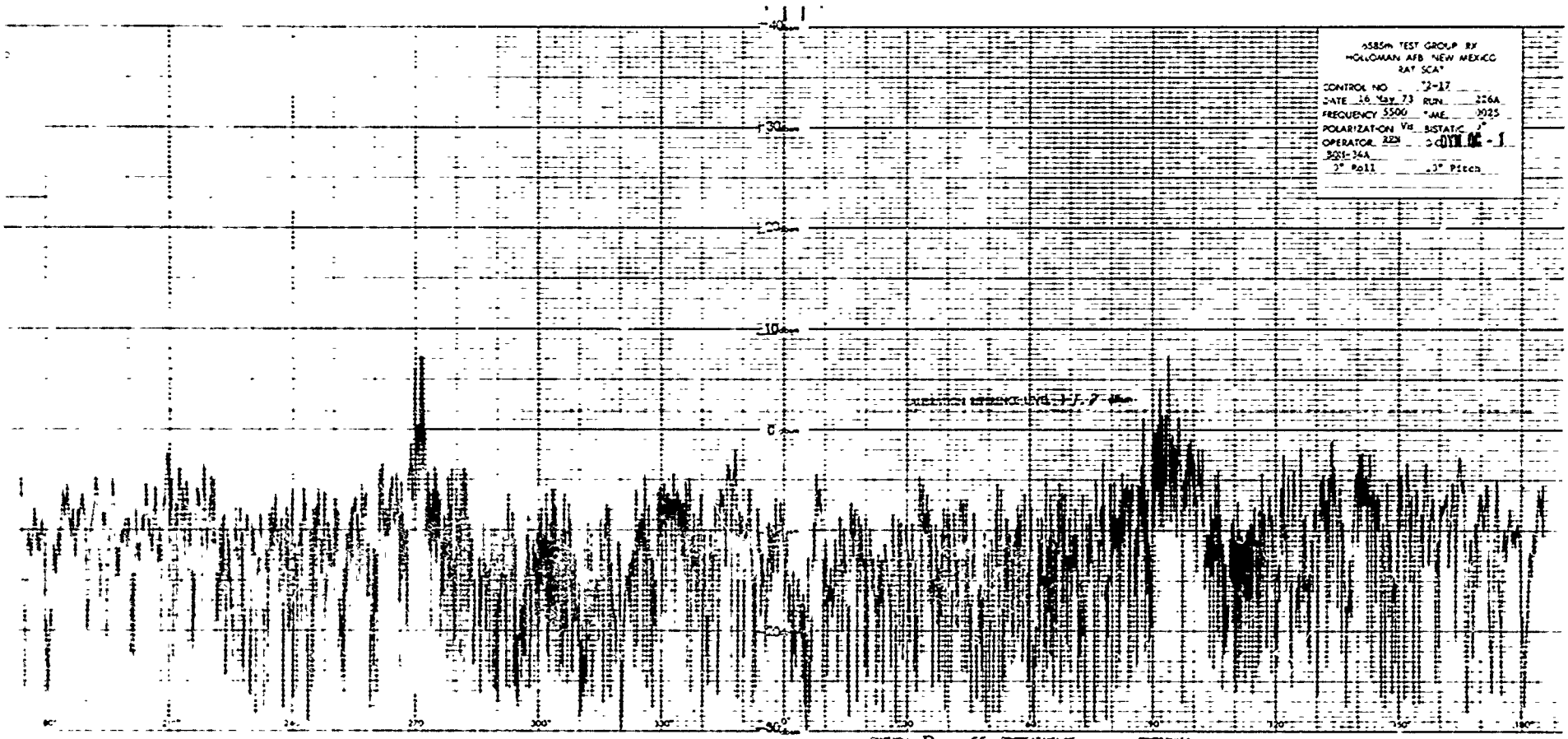

6585th TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
BAT SCAT
CONTROL NO
DATE 15 May 73 RUN 2156
FREQUENCY 5500 TIME 1825
POLARIZATION TH BISTATIC 0°
OPERATOR
NOM-168
50° Roll
/° Pitch
30
60
90
120
150
180

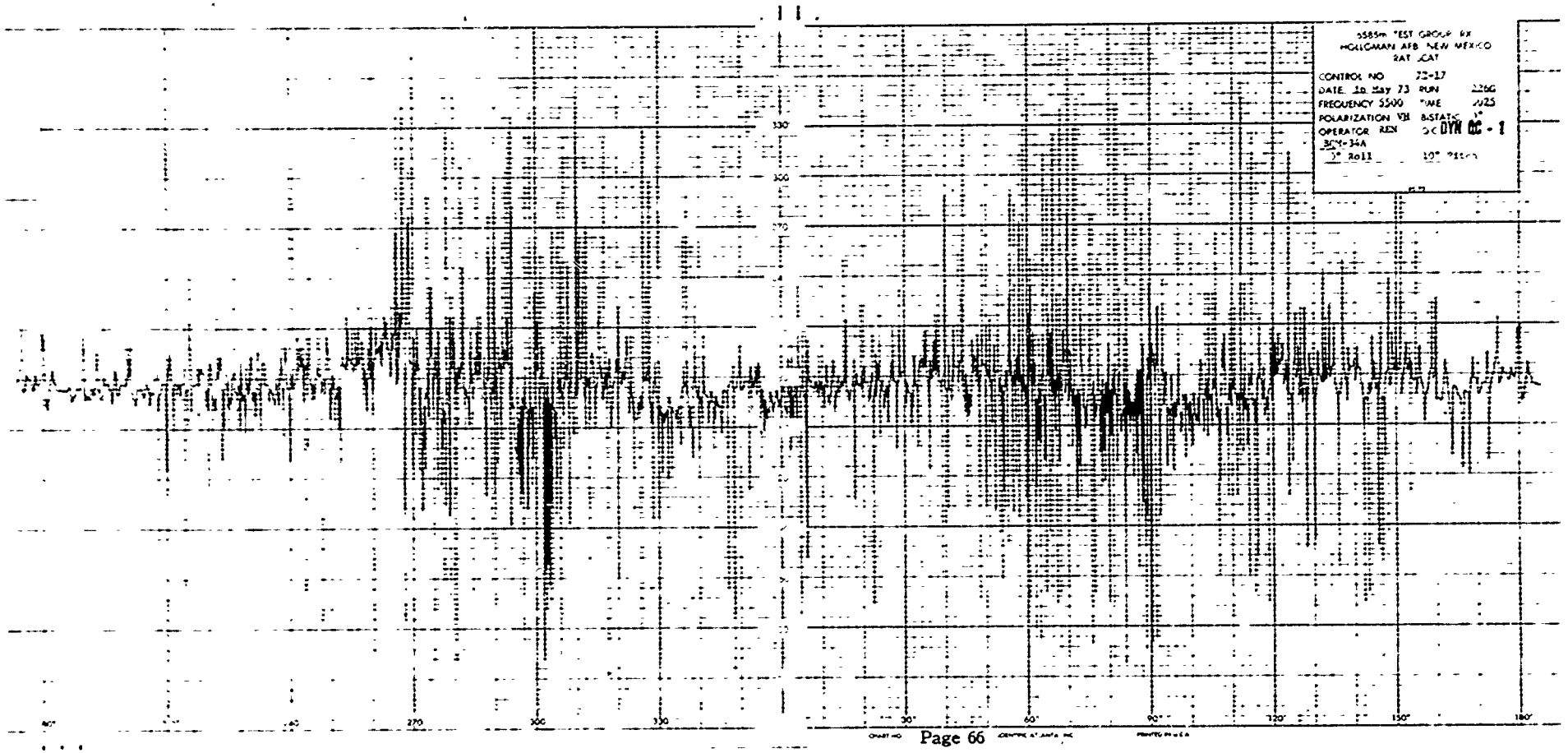

6585th TEST GROUP RAI
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 12 DEC 72 RUN 2256
FREQUENCY 5500 TIME 2335
POLARIZATION HH BISTATIC 0°
OPERATOR Rich
B2M-34A
0° Roll
10° Pitch
40
20
10
0
270°
300°
330°
30°
90°
330°
180°

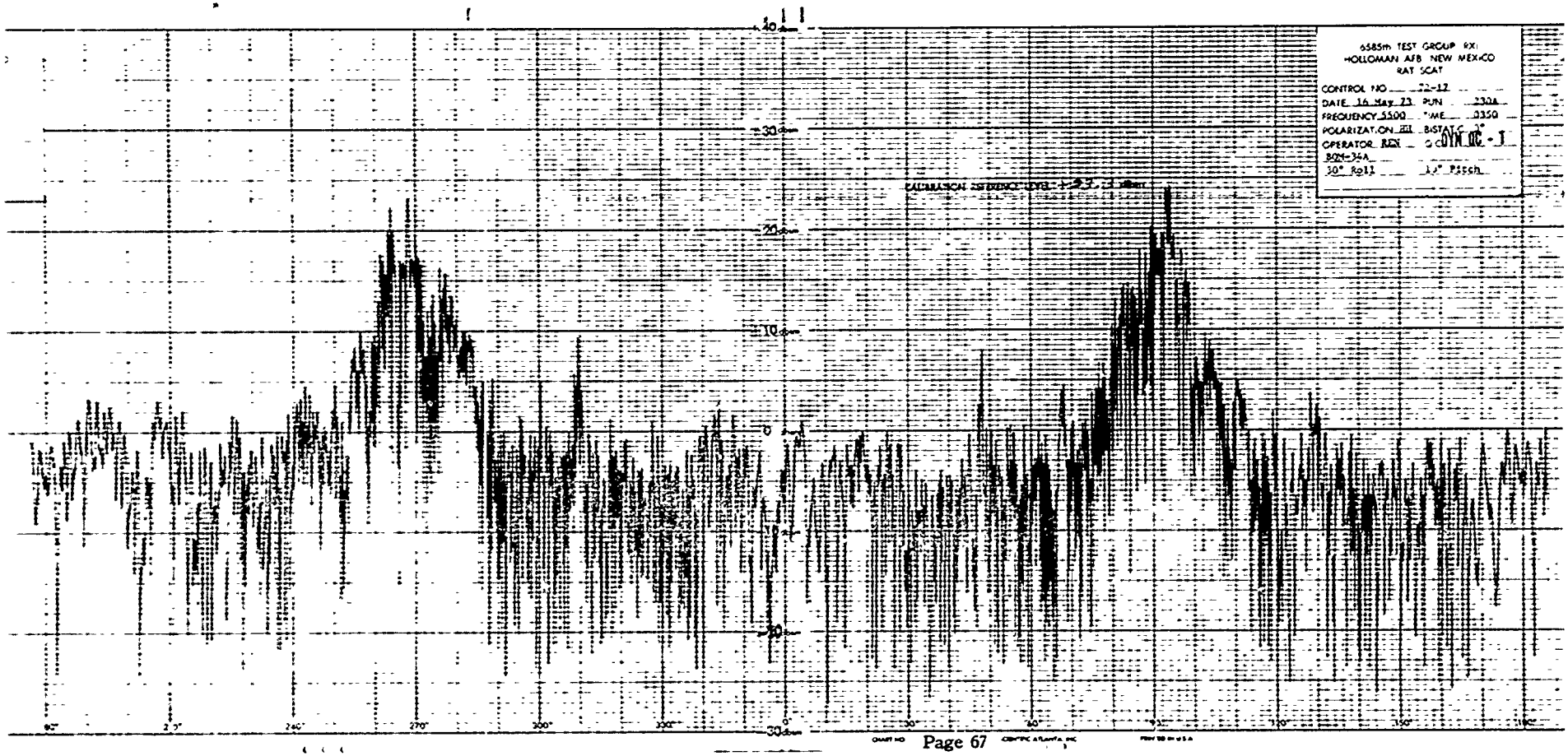

6585th TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO 12-17
DATE 15 May 73 RUN 056
FREQUENCY 5500 TIME 335
POLARIZATION HH
OPERATOR BEN
DATA RC - I

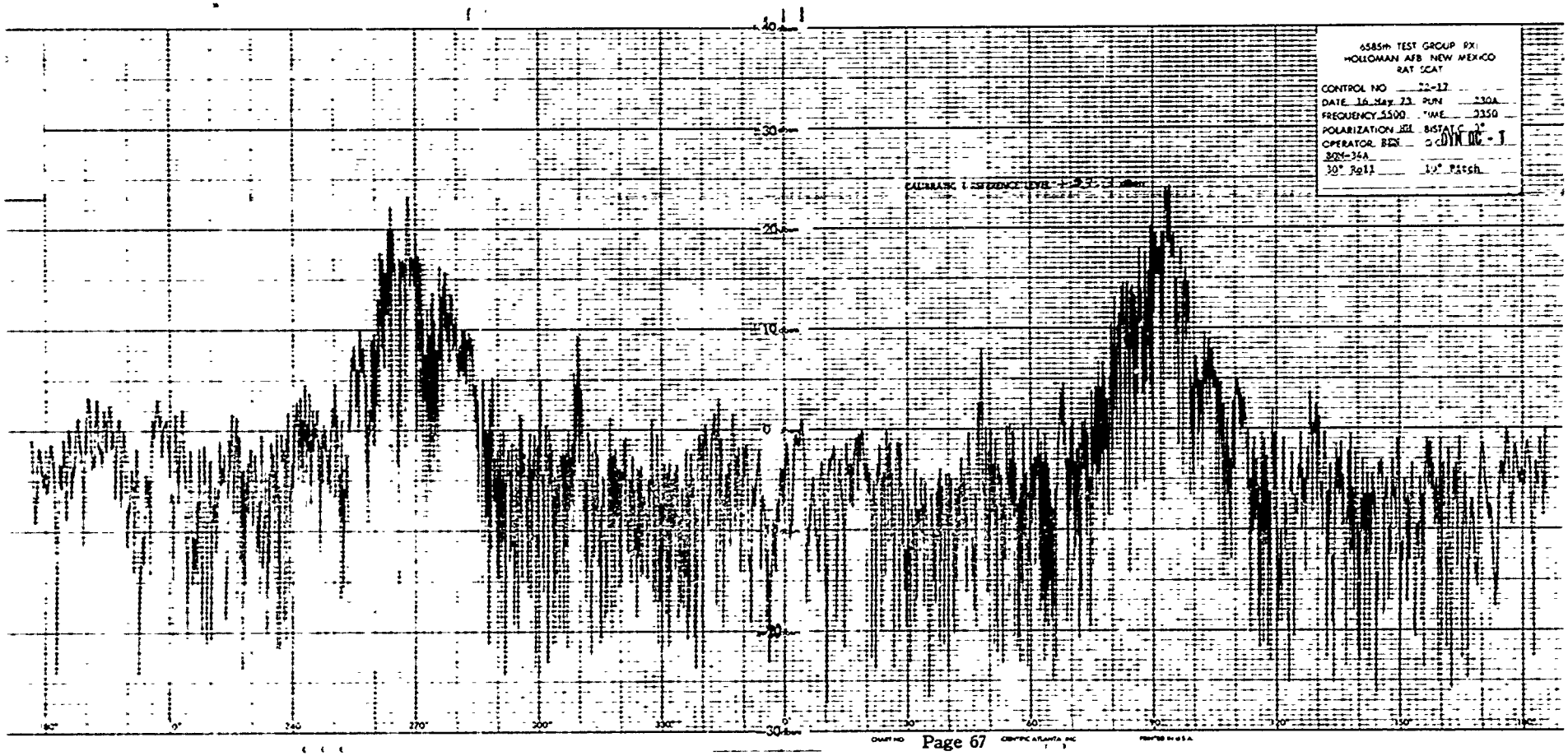

6585th TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO
DATE 16 May 73 RUN
FREQUENCY
POLARIZATION
OPERATOR
DYN 62 - 1
Roll
Pitch
40
30
20
10
0
60°
90°
120°
150°
180°
210°
270°
300°
330°

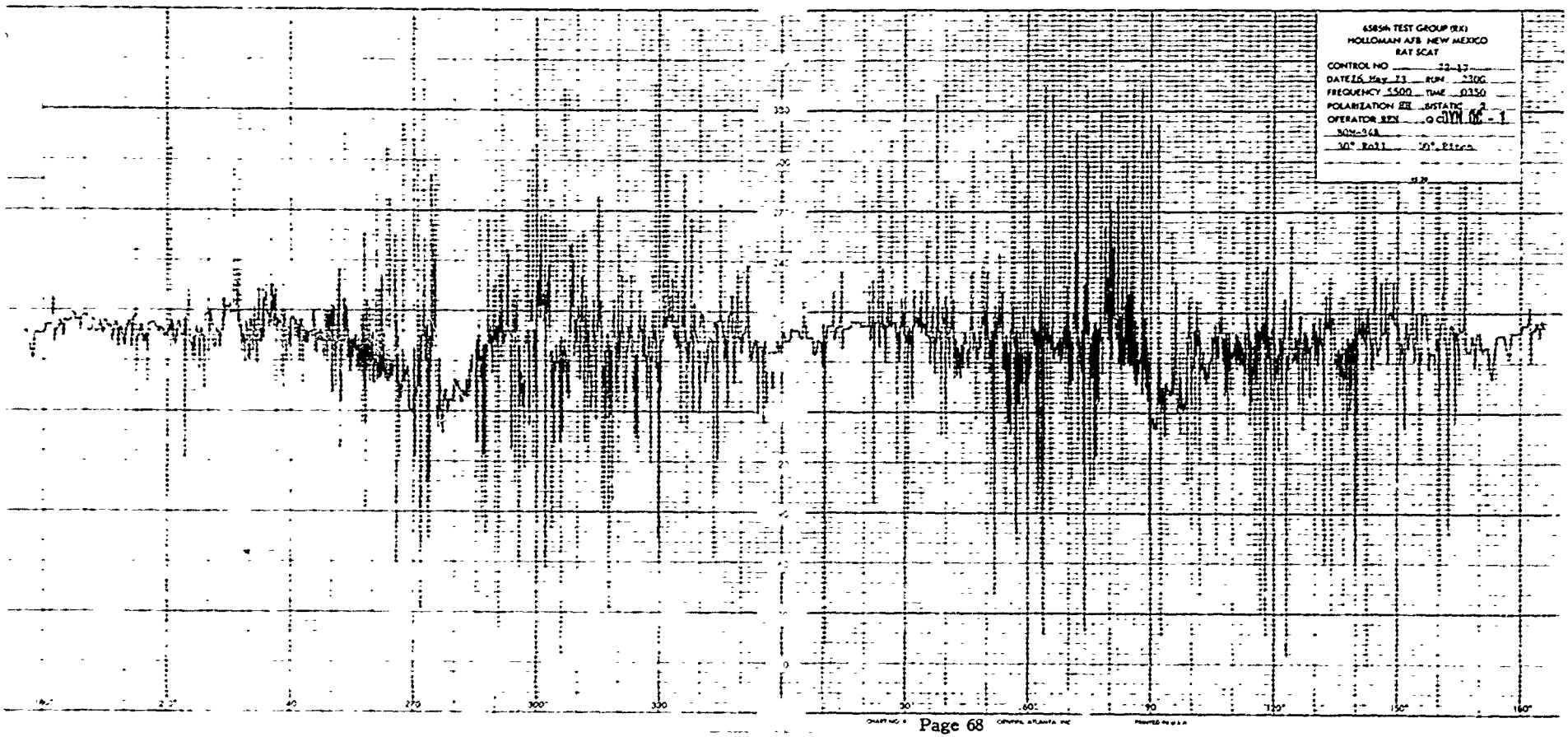

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO
DATE 16 May 73
RUN
FREQUENCY 5500
TIME
POLARIZATION
OPERATOR
RAT SCAT - 1
30°
60°
90°
120°
150°

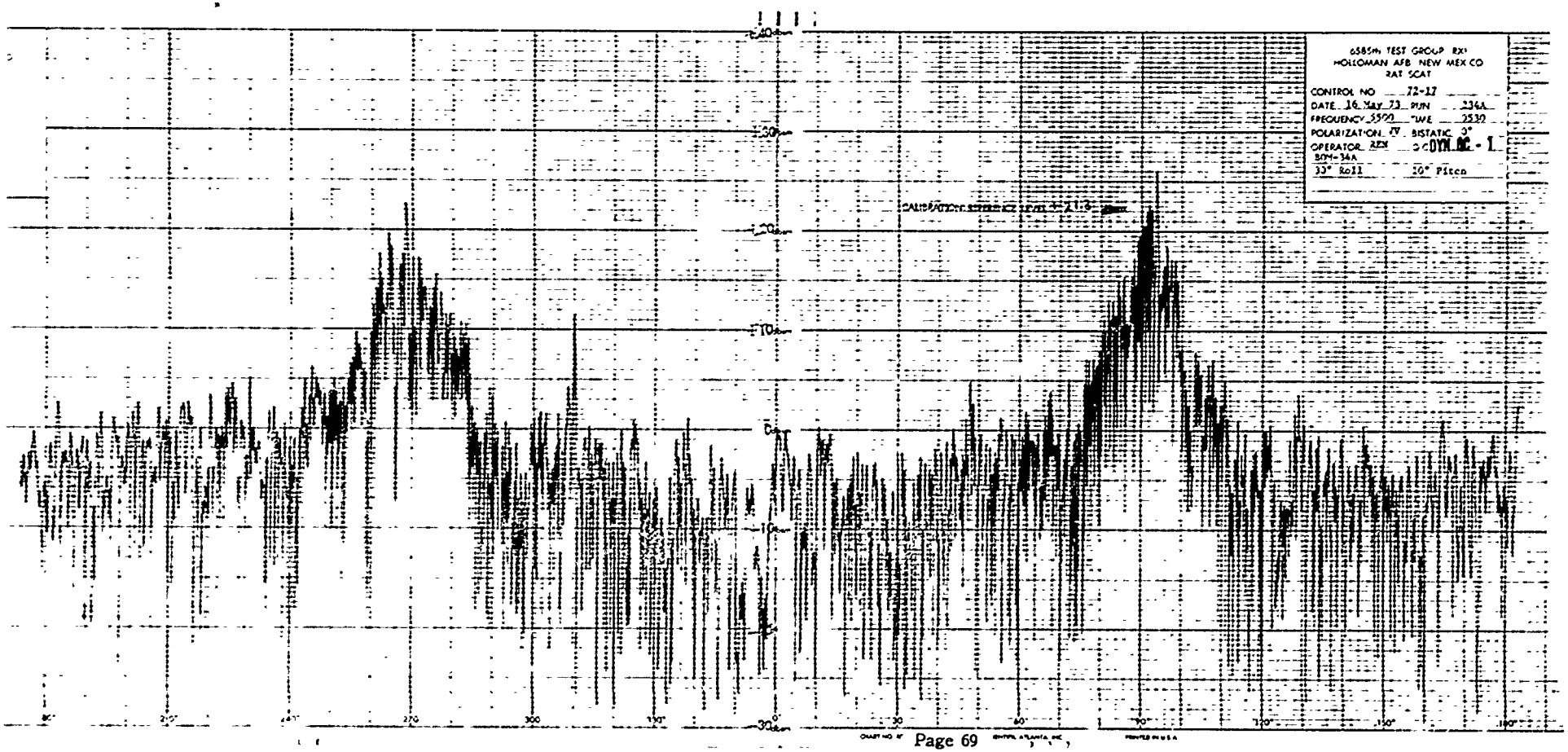

6585m TEST GROUP BY
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 16 May 73 RUN 226A
FREQUENCY 5500 TAPE 3025
POLARIZATION Vd BISTATIC 3°
OPERATOR 225
3025-26A
3° Roll 3° Pitch
40
30
20
10
0
-10
-20
-30
90°
180°
270°
300°
330°
0°
30
60
90
120
150°
180°

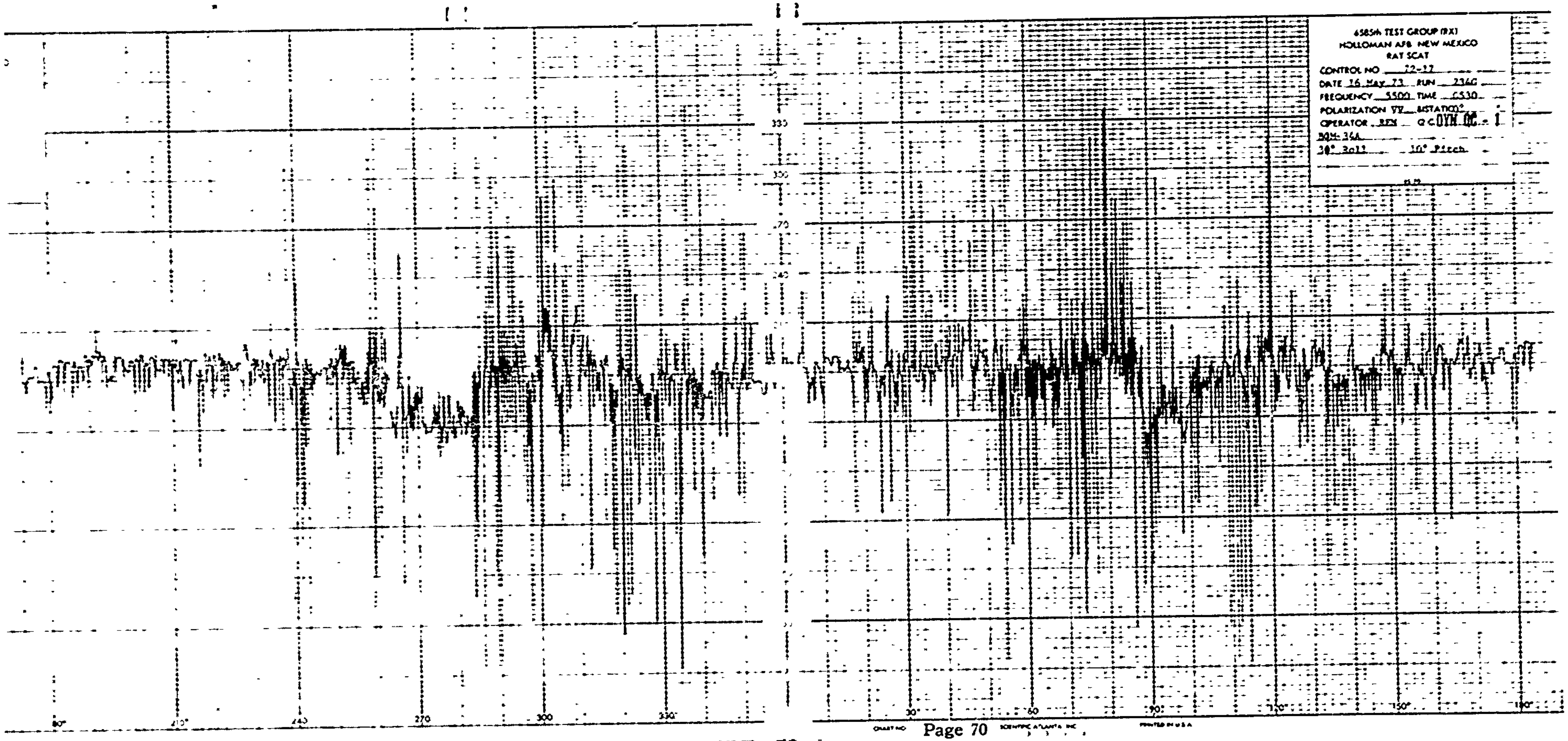

5585m TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
RAT /CAT
CONTROL NO 72-17
DATE 26 May 73 RUN 2266
FREQUENCY 5500 TIME 2025
POLARIZATION VH BISTATIC 1°
OPERATOR REN SC DYN RC - 1
30°M-34A
3° Roll 10° Pitch
330
300
270
300
330
30°
60°
90°
120°
150°
180°

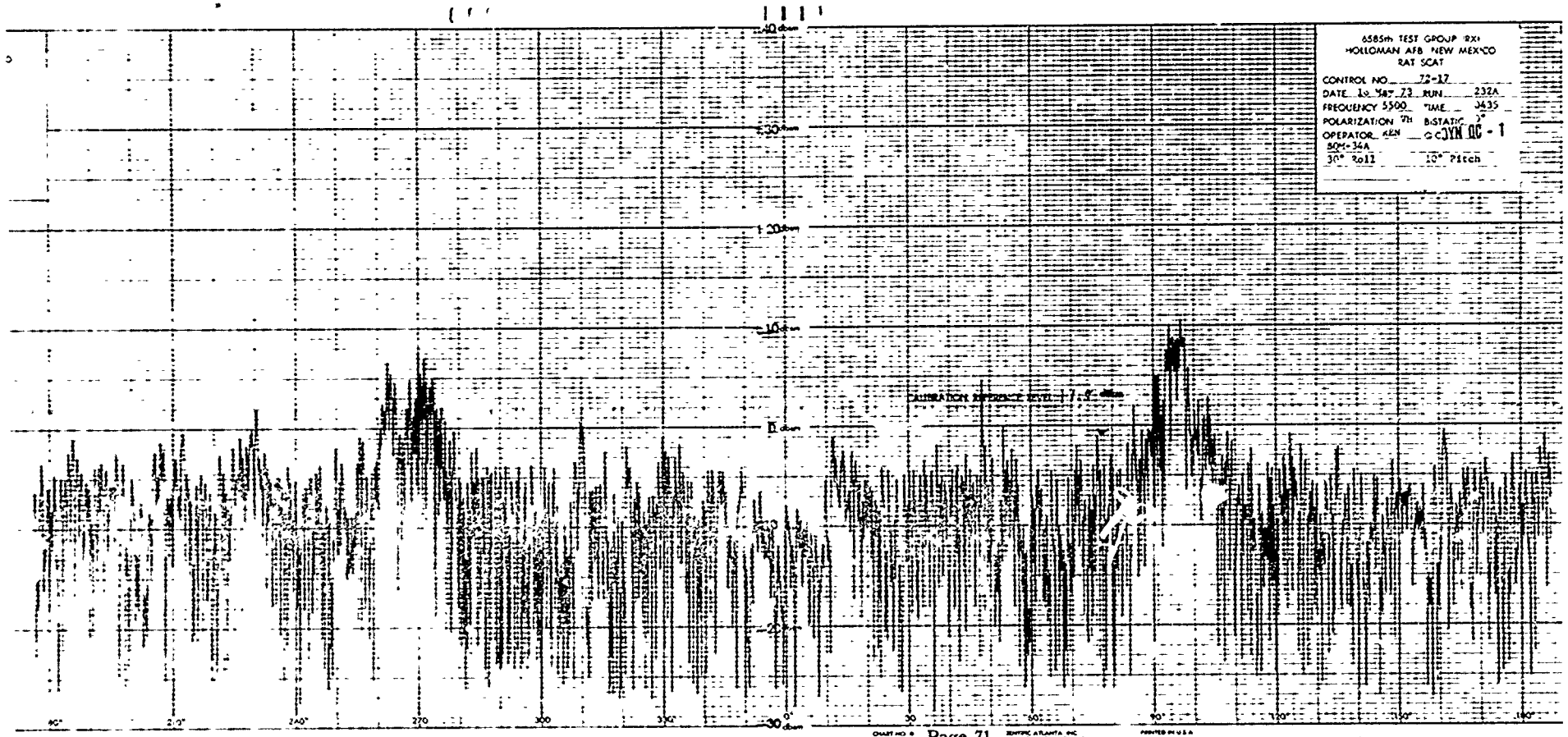

6585th TEST GROUP RXI
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-12
DATE 16 May 73 RUN 230A
FREQUENCY 5500 TIME 0350
POLARIZATION HH BISTATIC 0°
OPERATOR REN CUT NO. - 1
80N-36A
30° Roll 1.5° Pitch
CALIBRATION REFERENCE LEVEL +25
40
30
20
10
0
-10
-20
-30
0°
30°
60°
90°
120°
150°
180°
210°
240°
270°
300°
330°

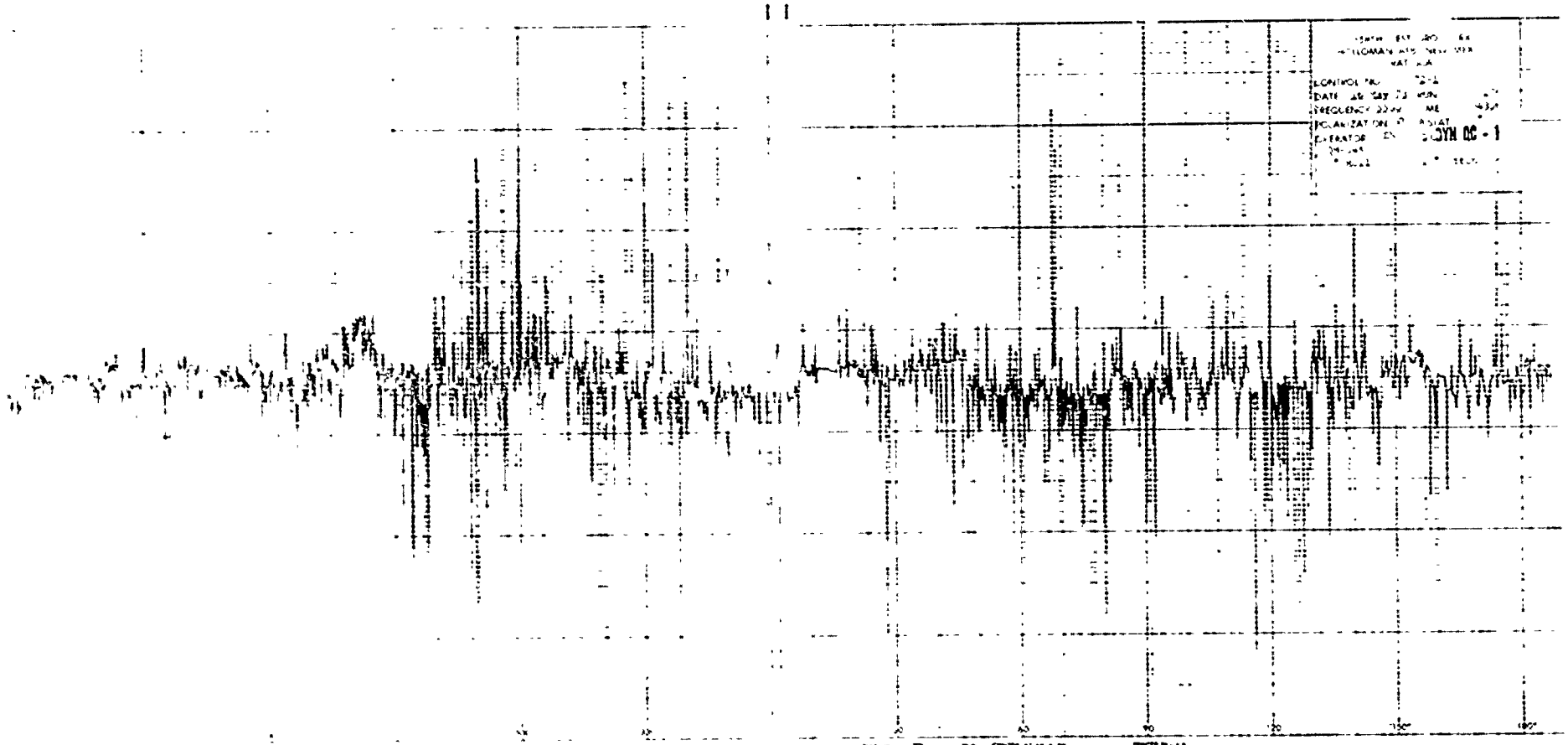

6585th TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 22-17
DATE 16 May 23 RUN 330A
FREQUENCY 5500 TIME 0350
POLARIZATION HH BISTATIC 0°
OPERATOR BEN
30N-36A
30° Roll 10° Pitch
DYN RC - 1
40
30
20
10
0
-10
-20
-30
0°
240
270°
300°
330°
0°
30°
60
90°
120
150°

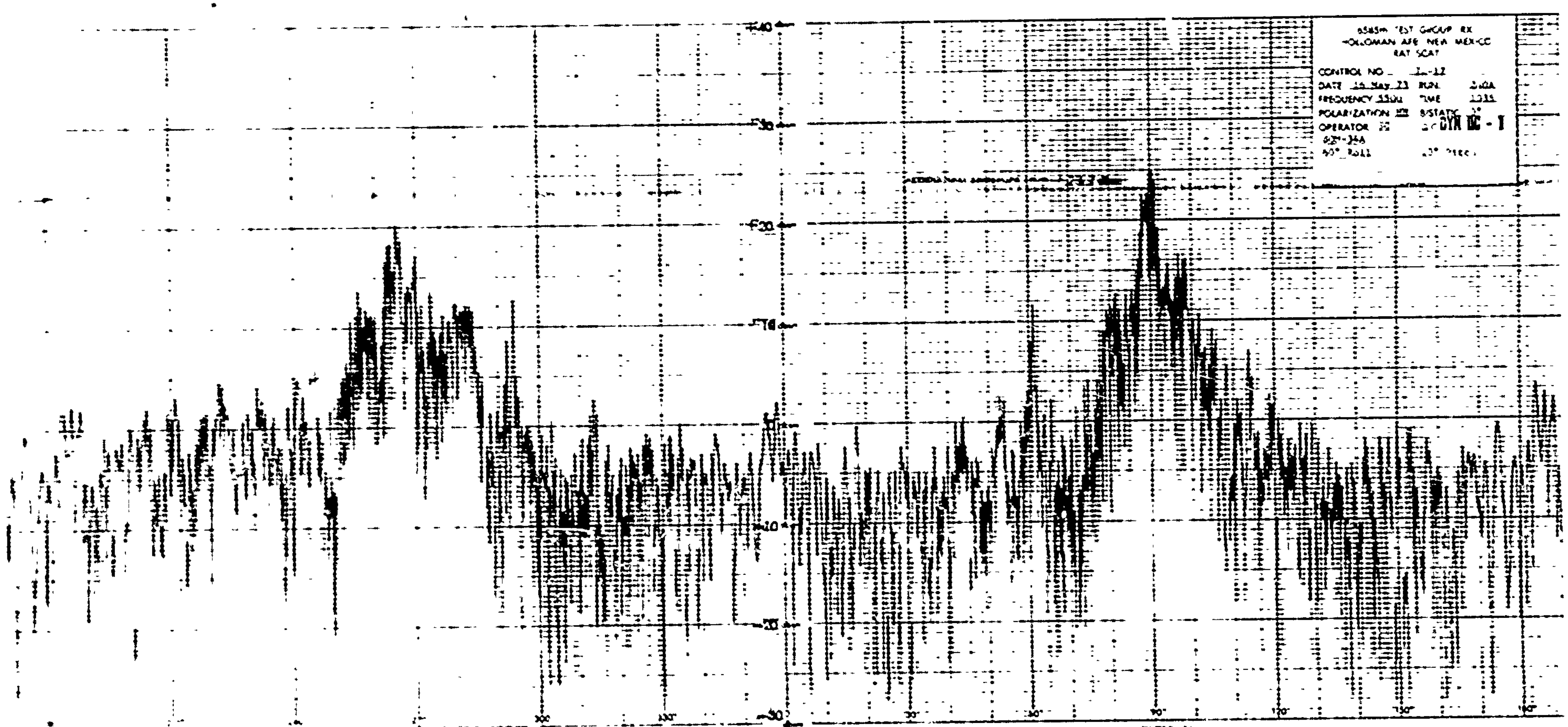

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 16 May 73 RUN 2306
FREQUENCY 5500 TIME 0350
POLARIZATION RR BISTATIC 2
OPERATOR BEN GCDYN RC - 1
30W-34R
30° Roll 20° Pitch
270
300°
330
30°
60°
90
120°
150°
180°

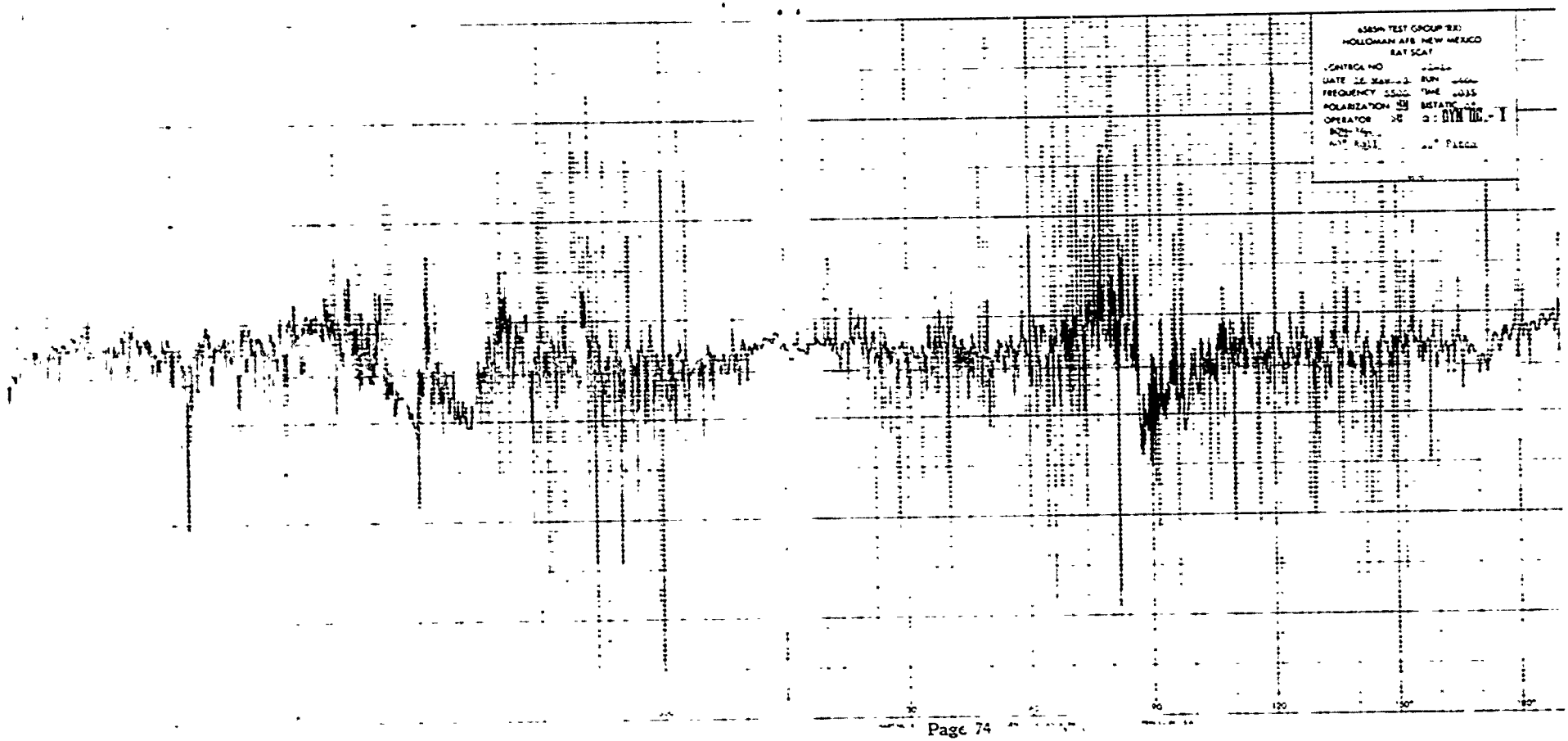

6585th TEST GROUP RX1
HOLLOMAN AFB NEW MEX CO
RAT SCAT
CONTROL NO 72-17
DATE 16 May 73 RUN 234A
FREQUENCY 5590 TAPE 2539
POLARIZATION VV BISTATIC 0°
OPERATOR REN
B0M-34A
33° Roll 20° Pitch
CALIBRATION REFERENCE LEVEL = 21.3
40
30
20
10
0
-10
-20
-30
270
300
330
0°
30
60
90
120
150
180

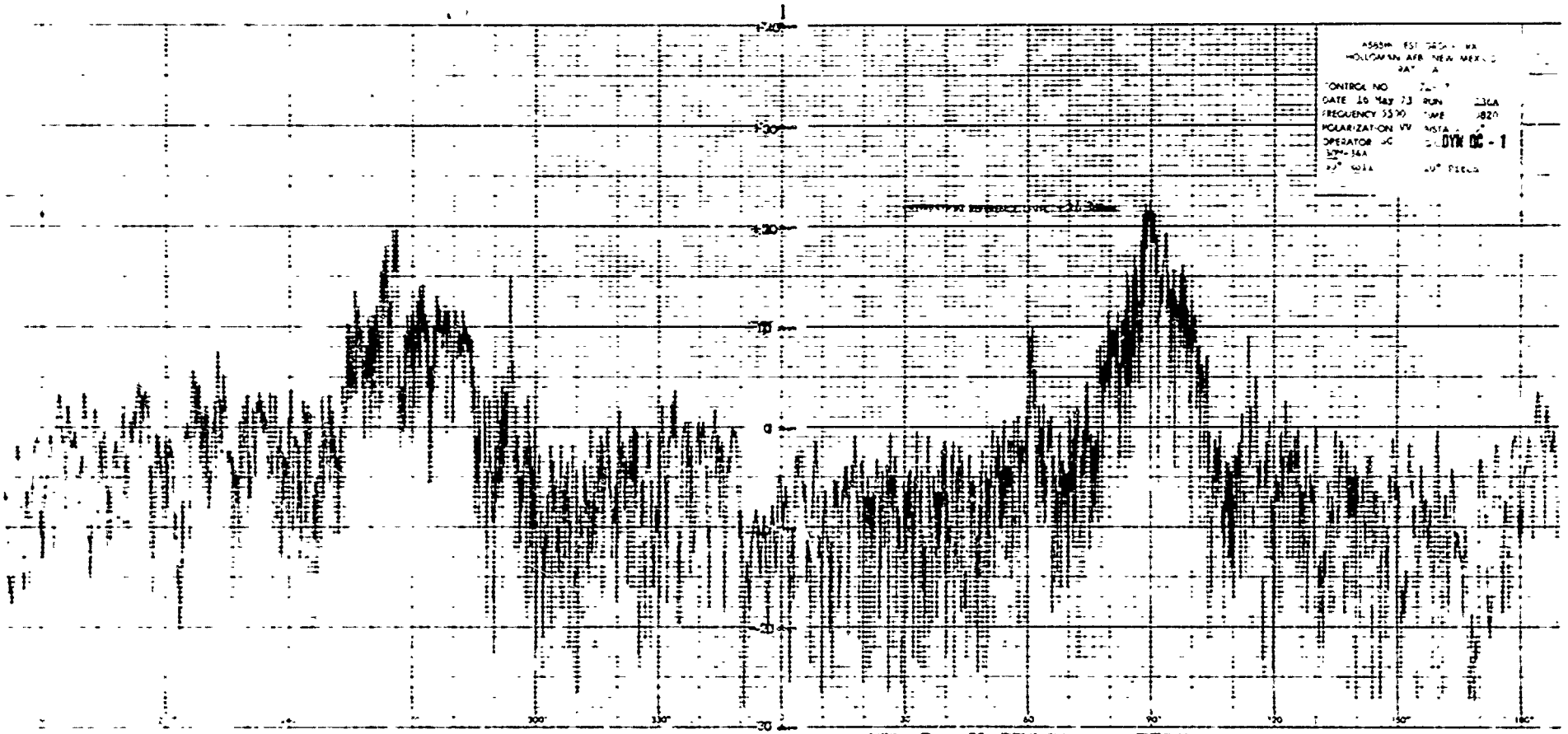

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 16 May 73 RUN 2346
FREQUENCY 5500 TIME 0530
POLARIZATION VV BISTATIC0°
OPERATOR REN Q.C. DYN OC - 1
BQM-34A
30° Roll 10° Pitch
30°
60°
90°
120°
150°
180°
210°
240°
270°
300°
330°
CHART NO
SCIENTIFIC ATLANTA, INC
PRINTED IN U.S.A.

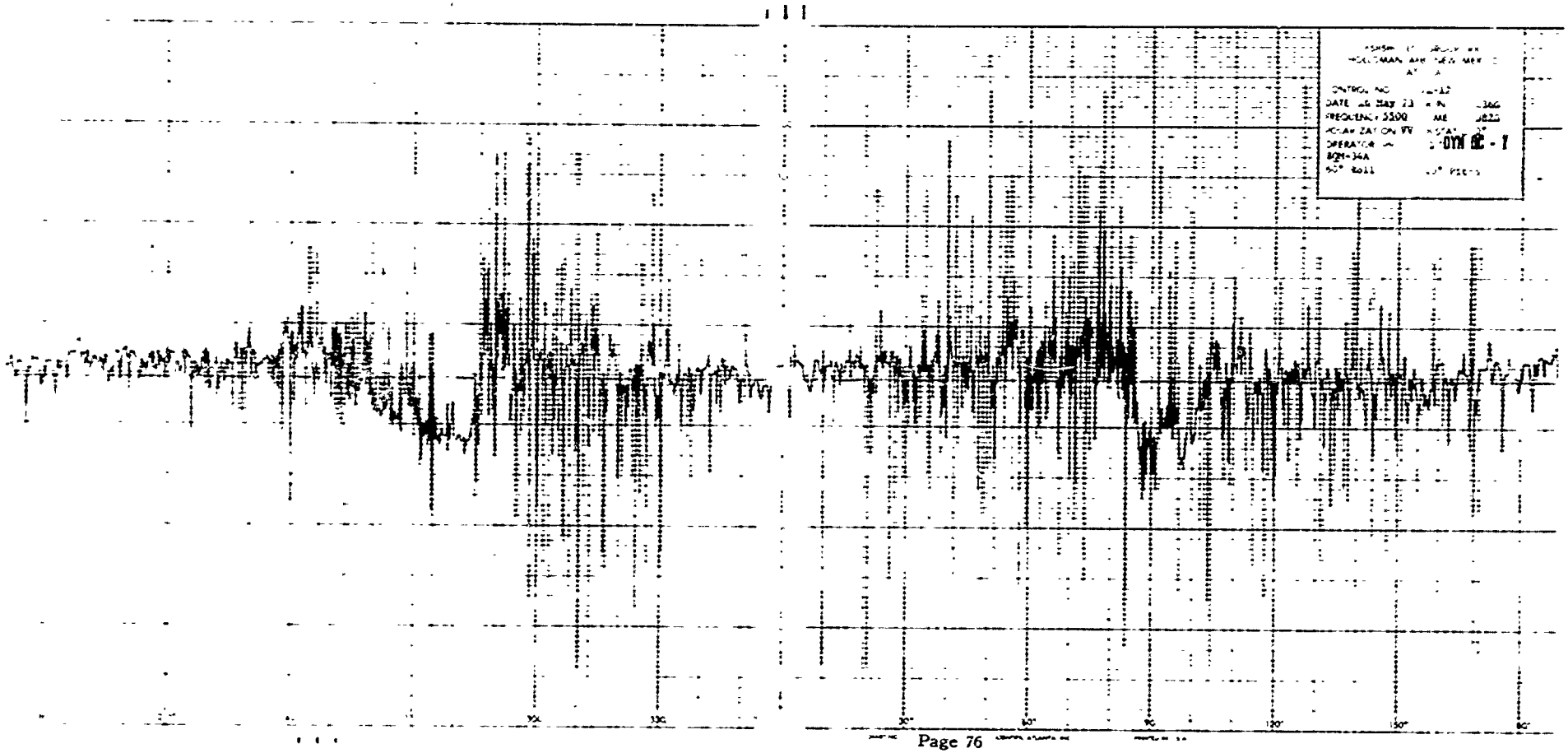

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO. 73-17
DATE 16 Mar 73 RUN 232A
FREQUENCY 5500 TIME 1635
POLARIZATION VH BISTATIC 0°
OPERATOR KEN GC3YN QC - 1
80M-36A
30° Roll 10° Pitch
40 dbsm
30 dbsm
20 dbsm
10 dbsm
0 dbsm
-10 dbsm
-20 dbsm
-30 dbsm
90°
210°
240°
270
300
330°
0°
30
60°
90°
120°
150°
180°

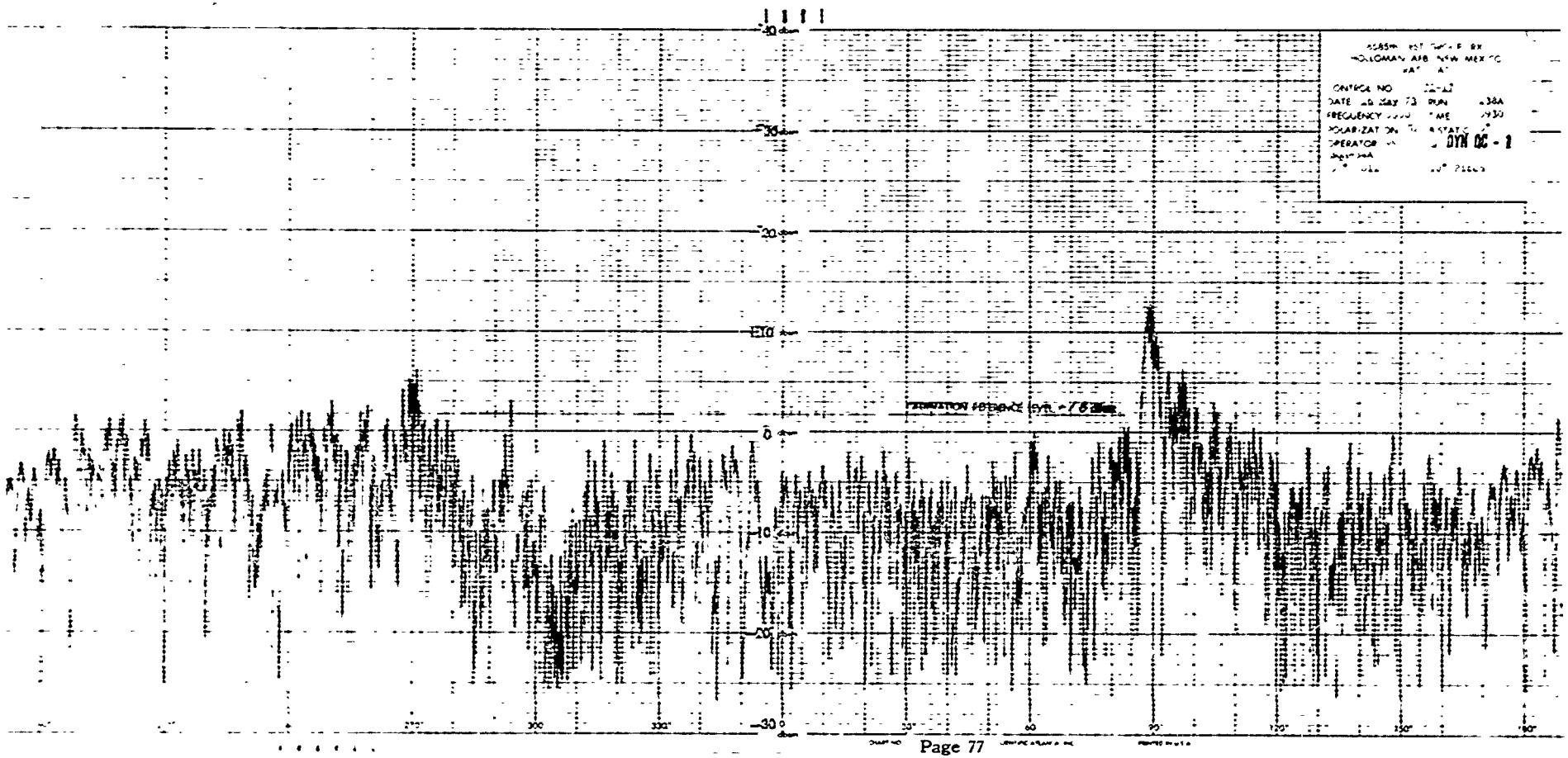


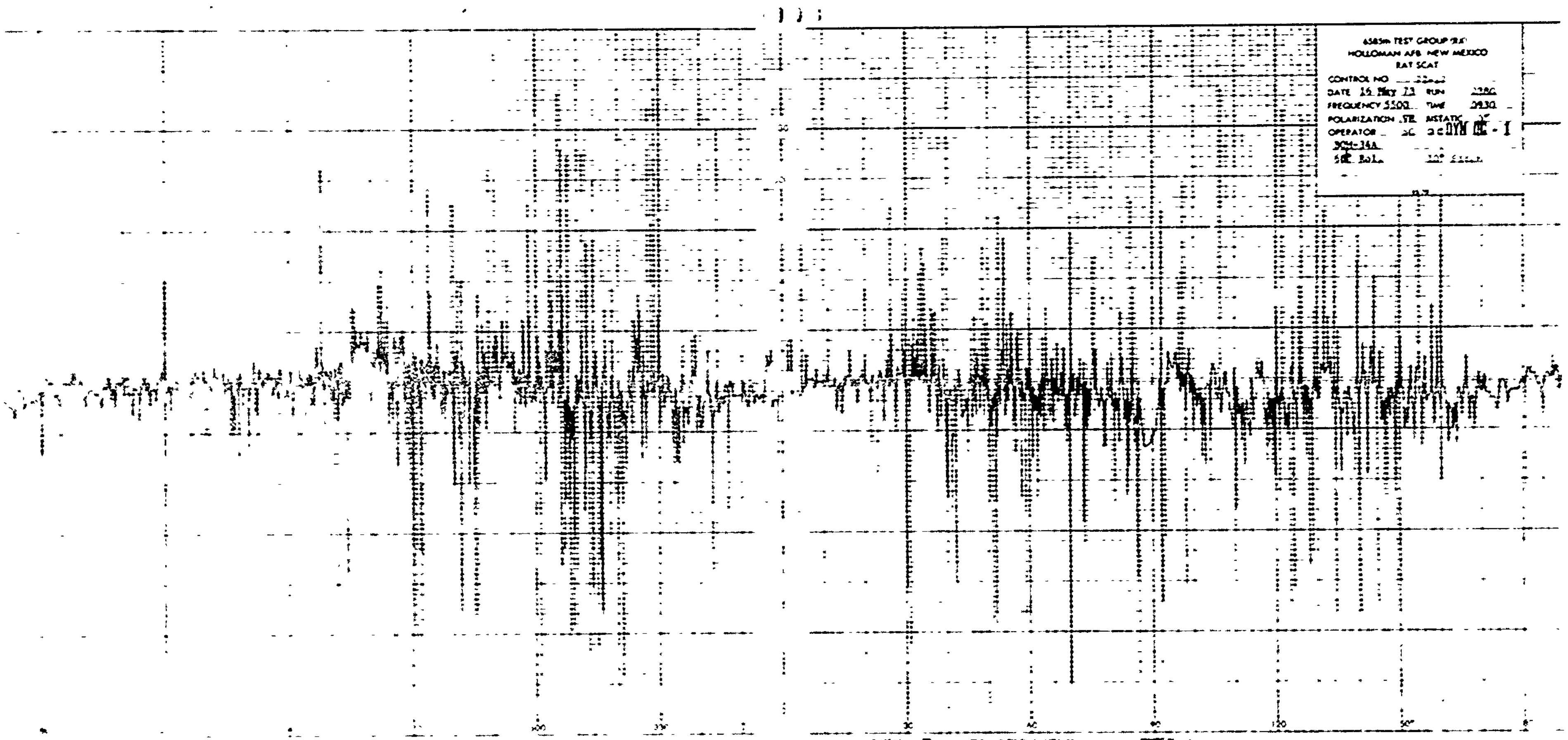

RAT SCAT
CONTROL NO.
DATE
RUN
FREQUENCY
TIME
POLARIZATION
BISTATIC
OPERATOR
+40
+30
+20
+10
-10
-20
-30
300°
330°
30°
60°
90°
120°
150°
180°

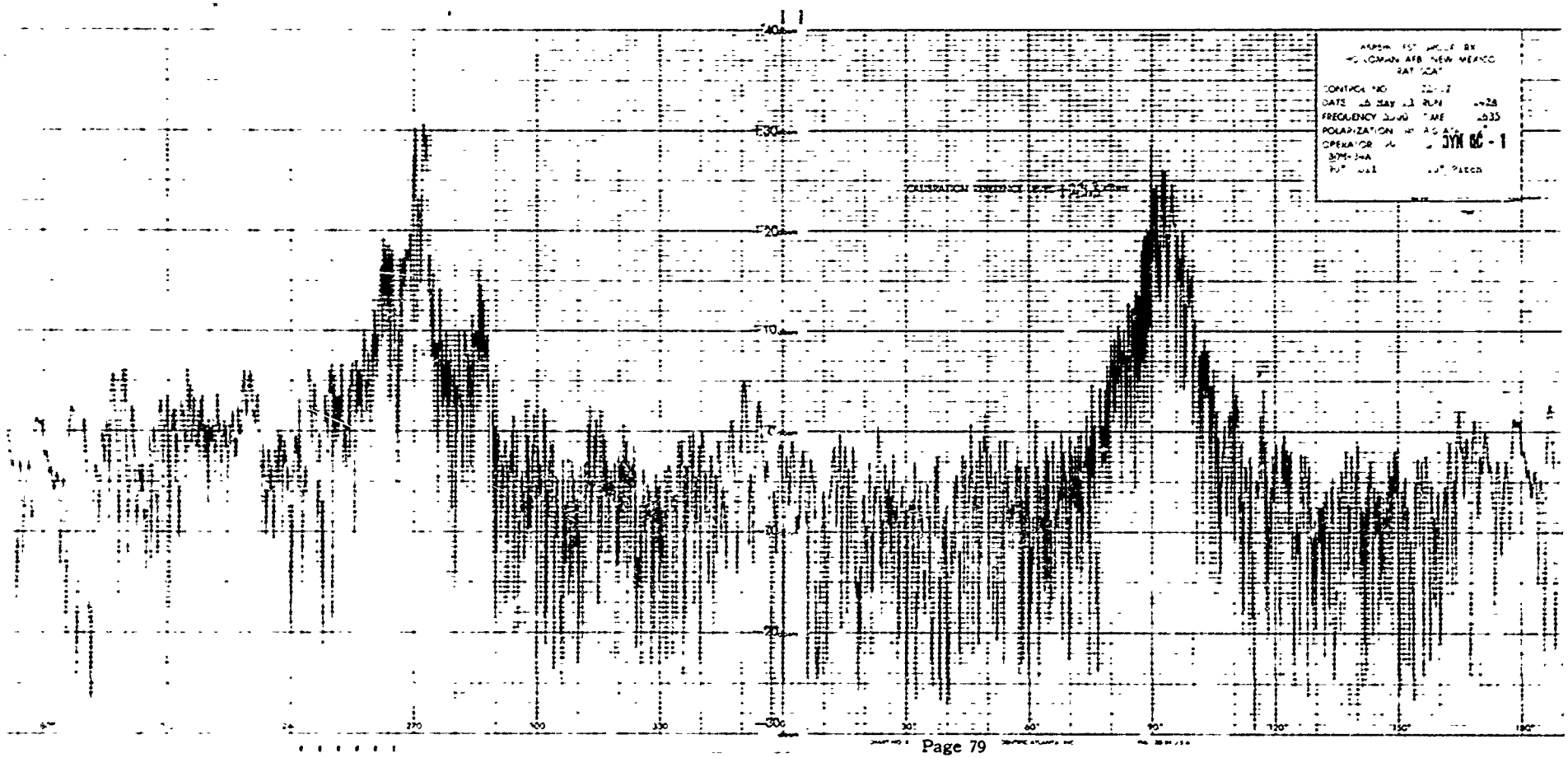

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
FREQUENCY
POLARIZATION
OPERATOR
30
90
120
150
180

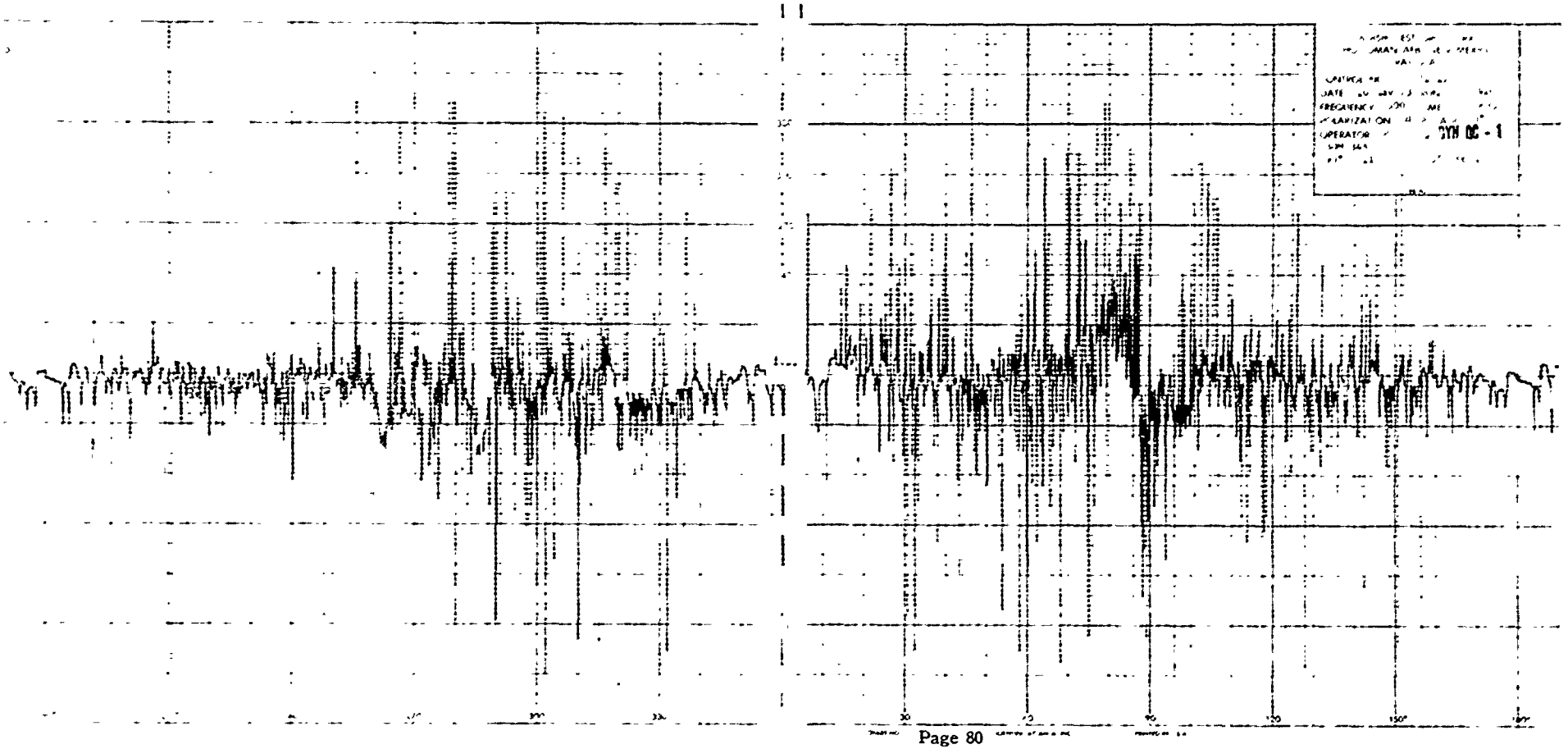

CONTROL NO
DATE 16 May 73
FREQUENCY 5530
POLARIZATION VV
OPERATOR JG
DYN RC - 1

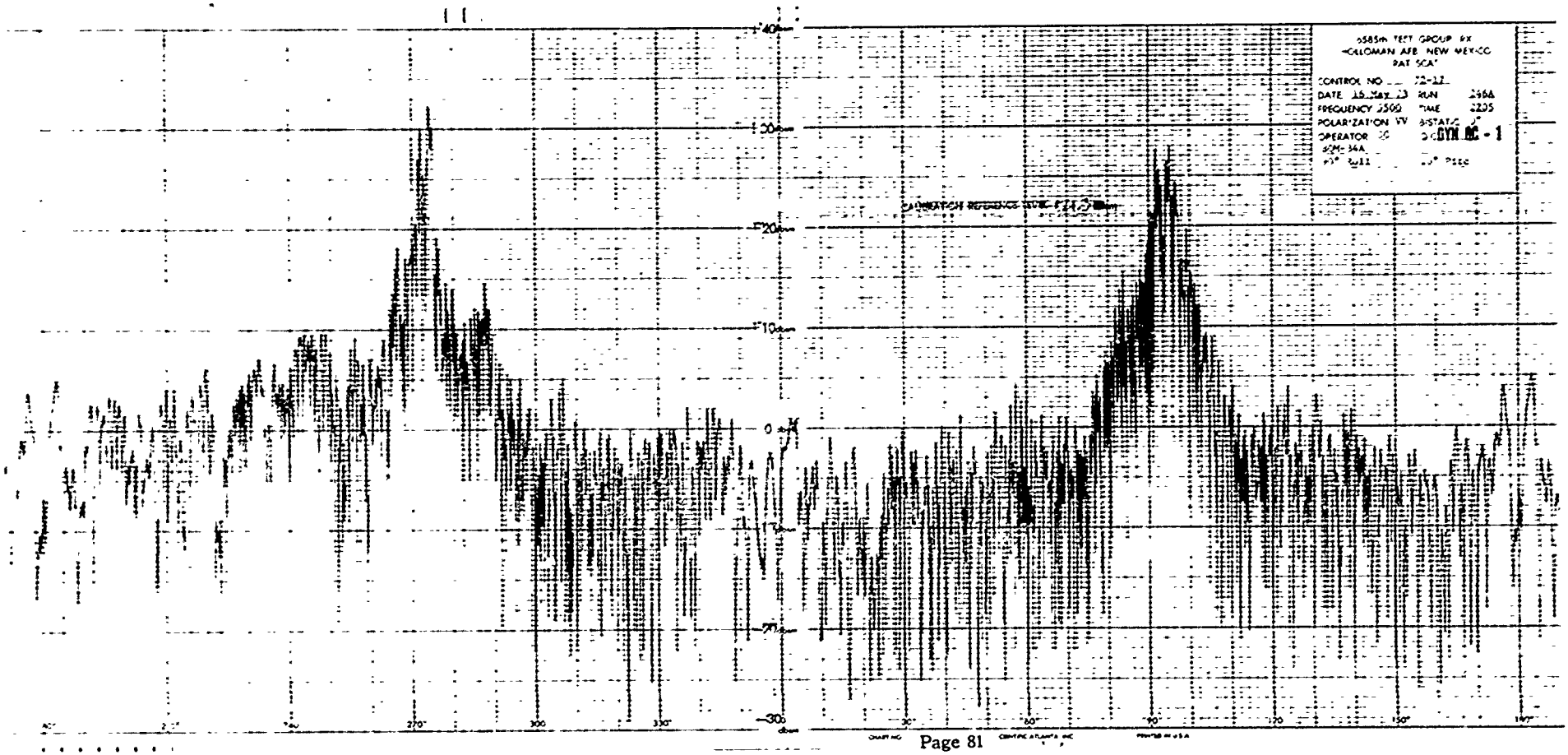


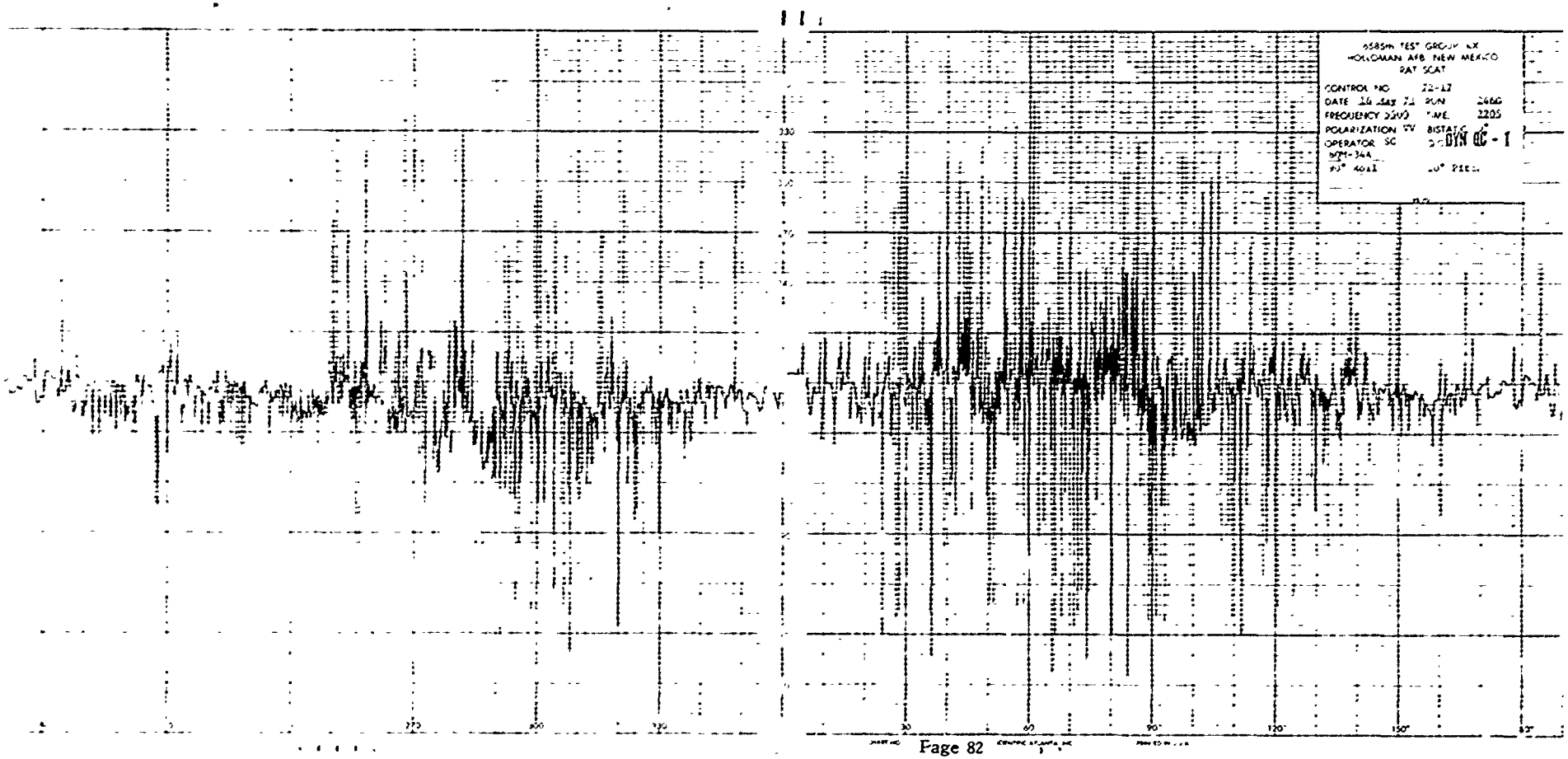

DYN DC - 1

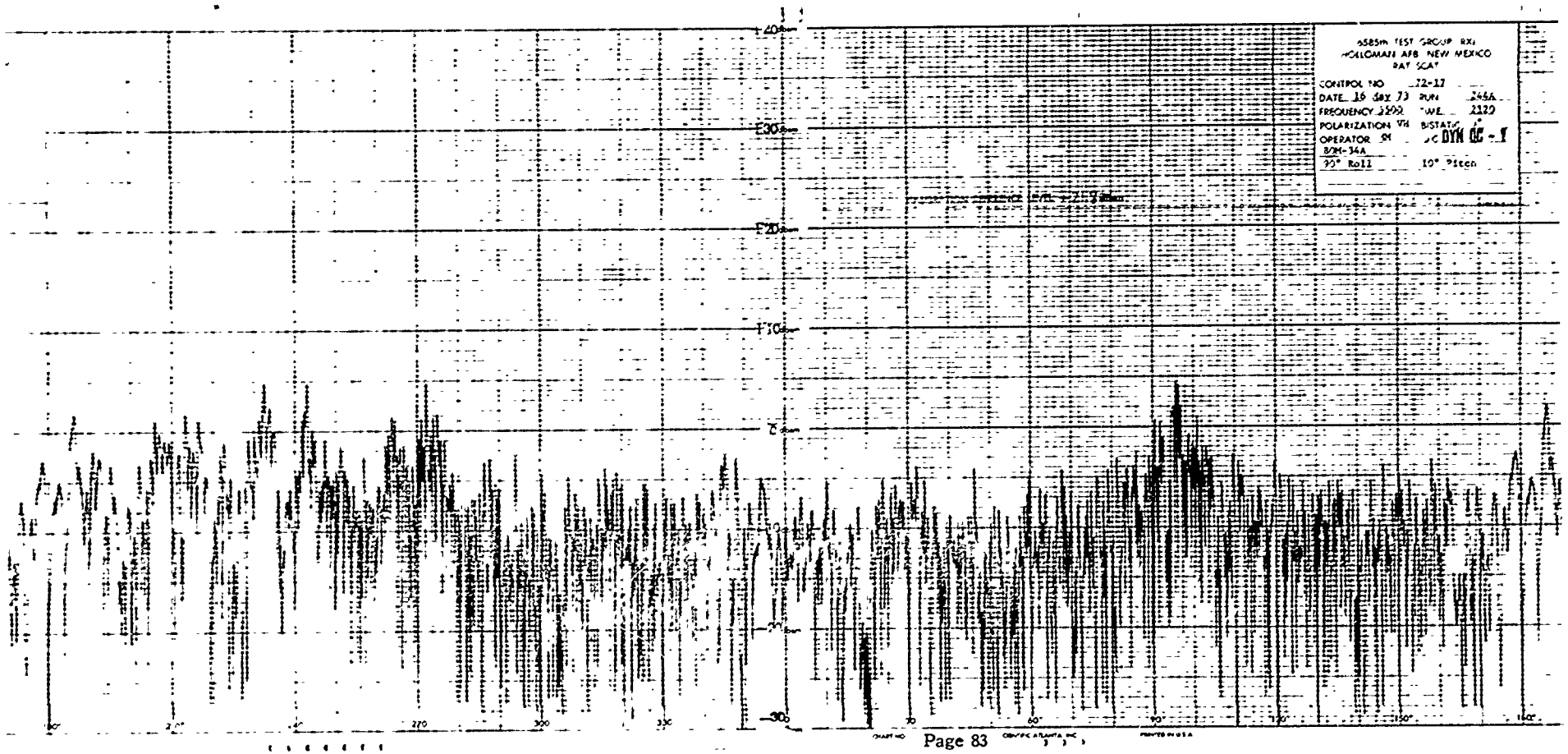

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO
DATE 16 May 73
RUN
FREQUENCY 5500
TIME
POLARIZATION
BISTATIC
OPERATOR

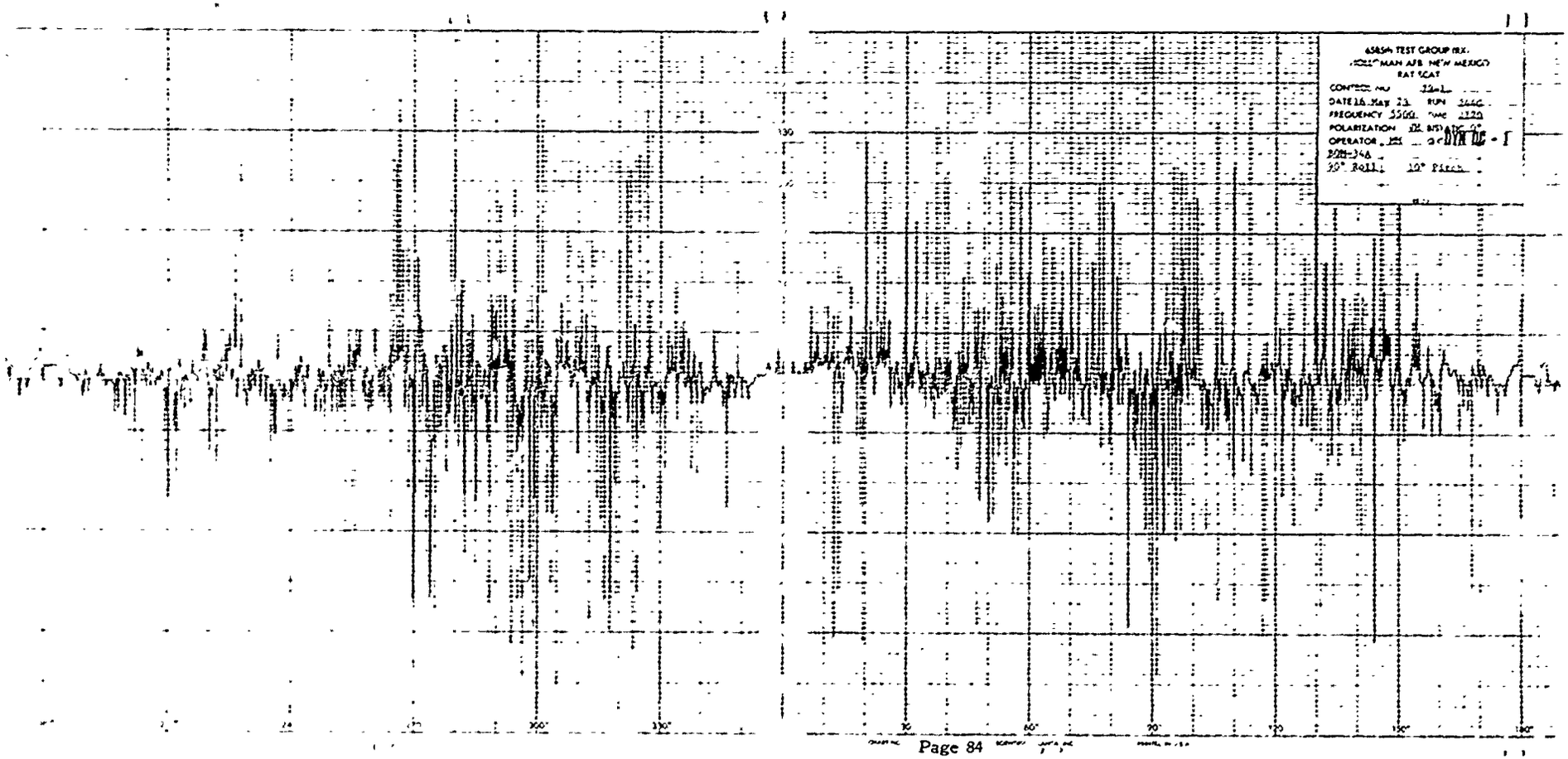

-40
-30
-20
-10
0
10
20
30
270
300
330
30
60
90
120
150
180

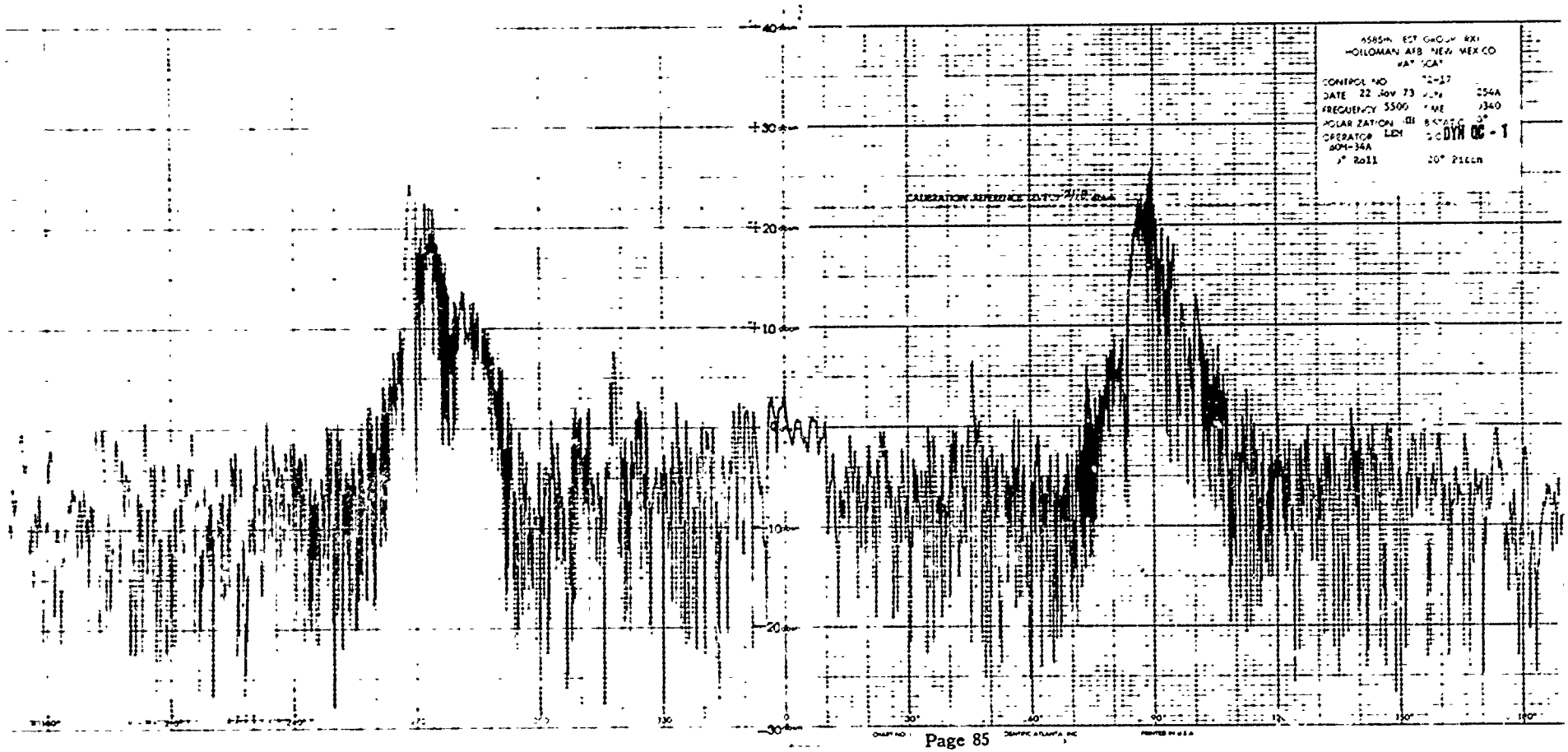


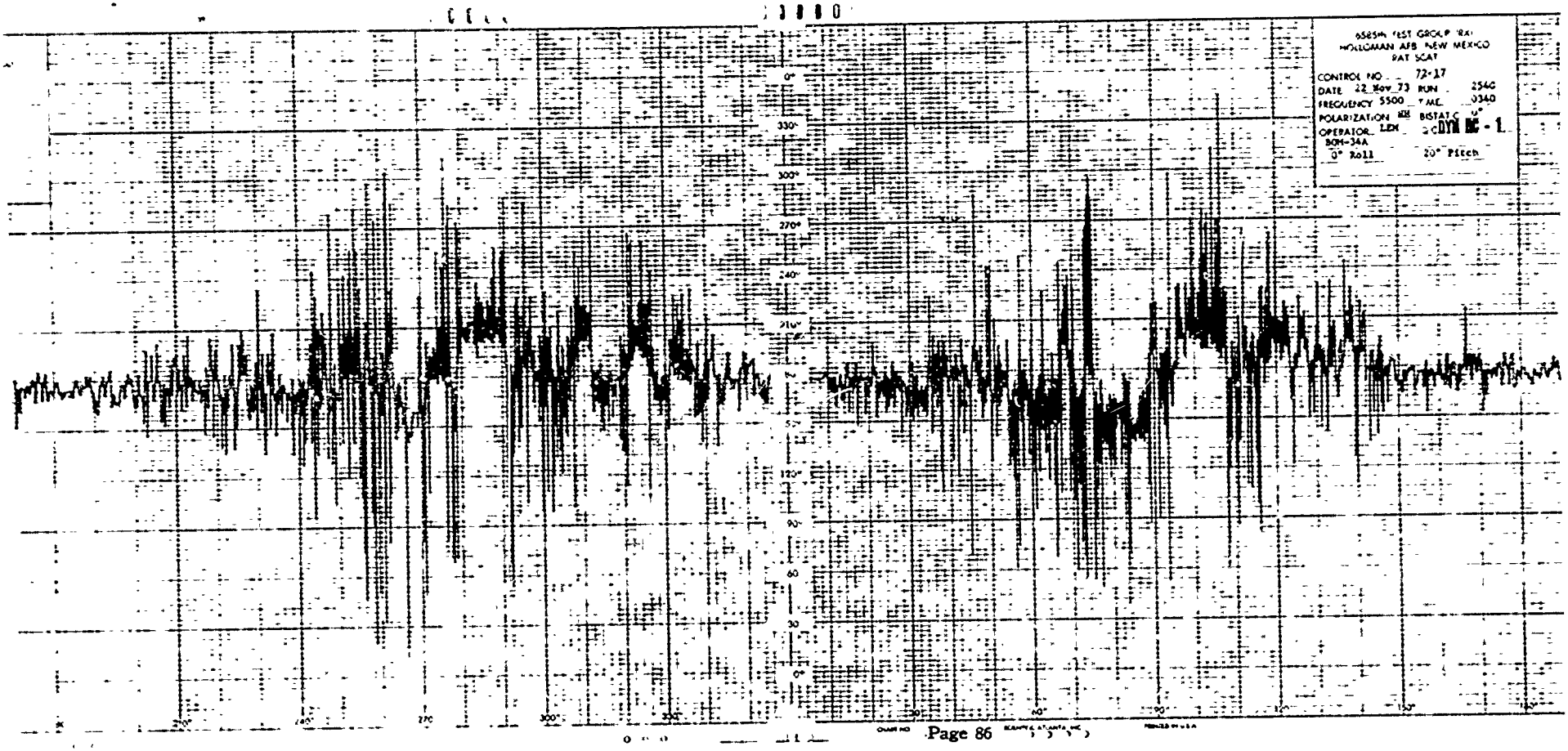

6585m TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-22
DATE 15 May 73
RUN 2468
FREQUENCY 5500
TIME 2205
POLARIZATION VV
OPERATOR JC
SCM: 34A
GYN AC - 1
+40
+30
+20
+10
0
-10
-20
-30
270°
300
330°
30°
60°
90°
120
150°

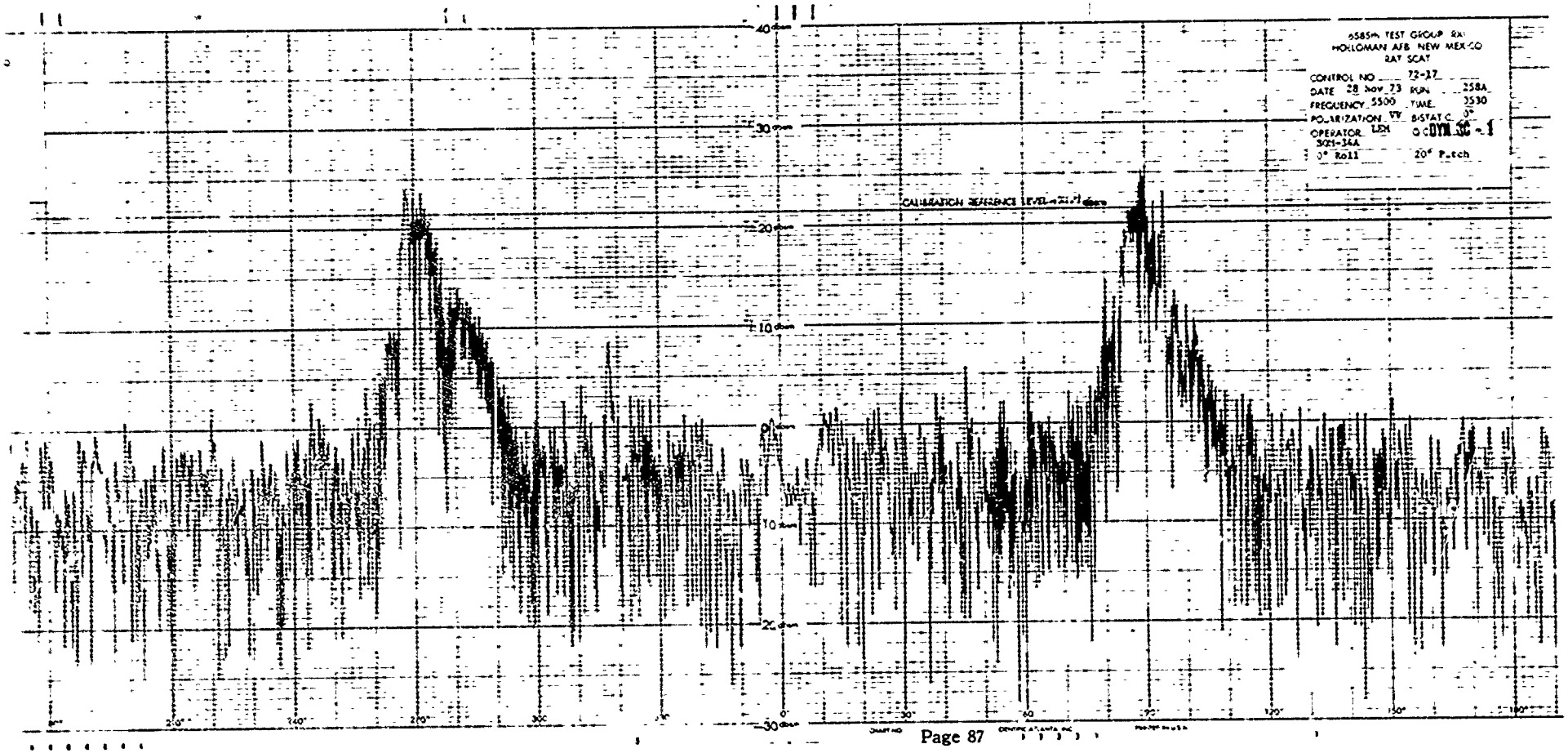

6585th TEST GROUP (AFSC)
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO 22-12
DATE 26 MAY 71
RUN 2466
FREQUENCY 5240
TIME 2205
POLARIZATION VV
BISTATIC
OPERATOR SC
DYN RC - 1
30
60
90
120
150

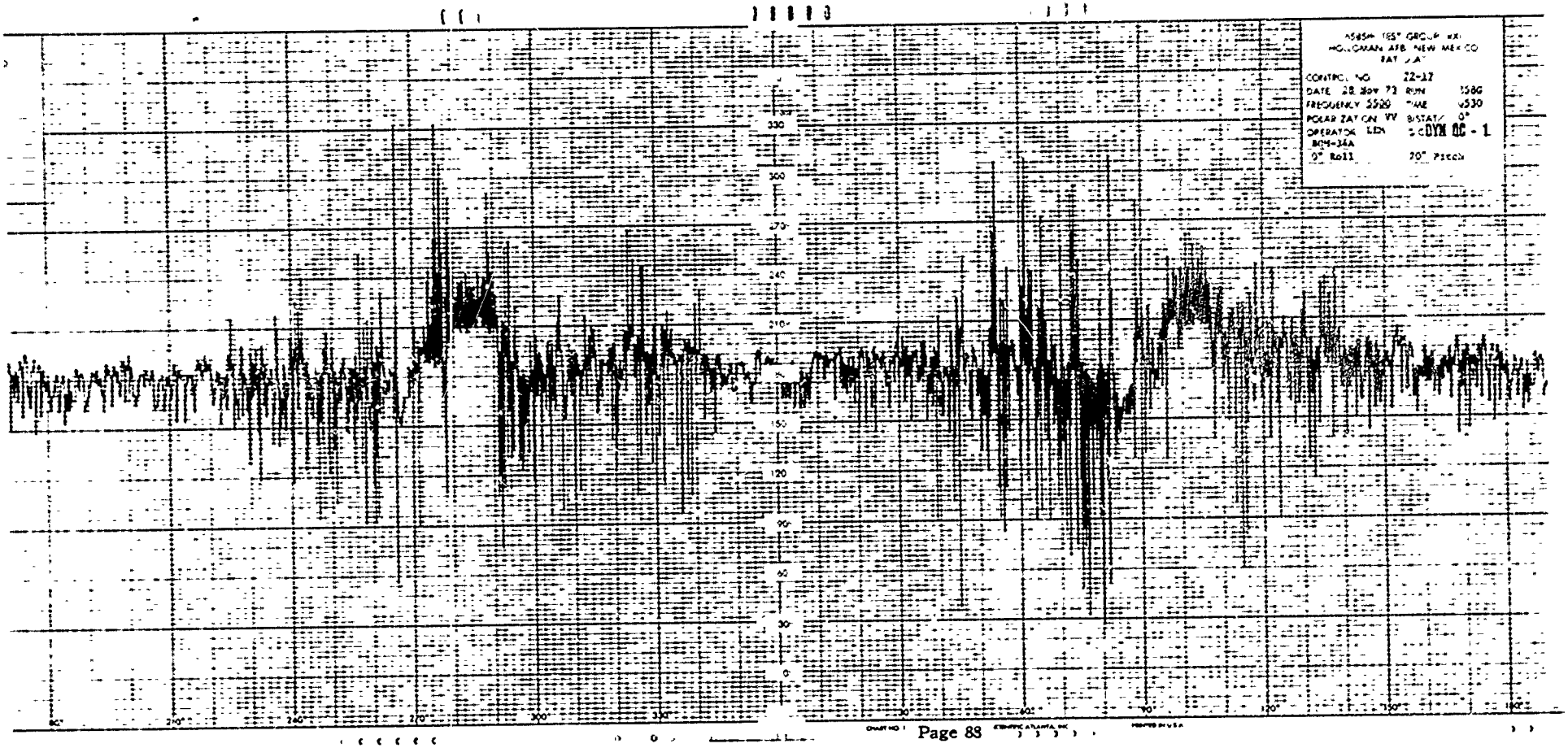

6585th TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 16 Mar 73 RUN 246A
FREQUENCY 3592 TIME 2120
POLARIZATION VH BISTATIC
OPERATOR SM AC DYN QC - 1
B/M-34A
90° Roll 10° Pitch
40
30
20
10
0
-10
-20
-30
270
300
330
30
60
90
120
150
180

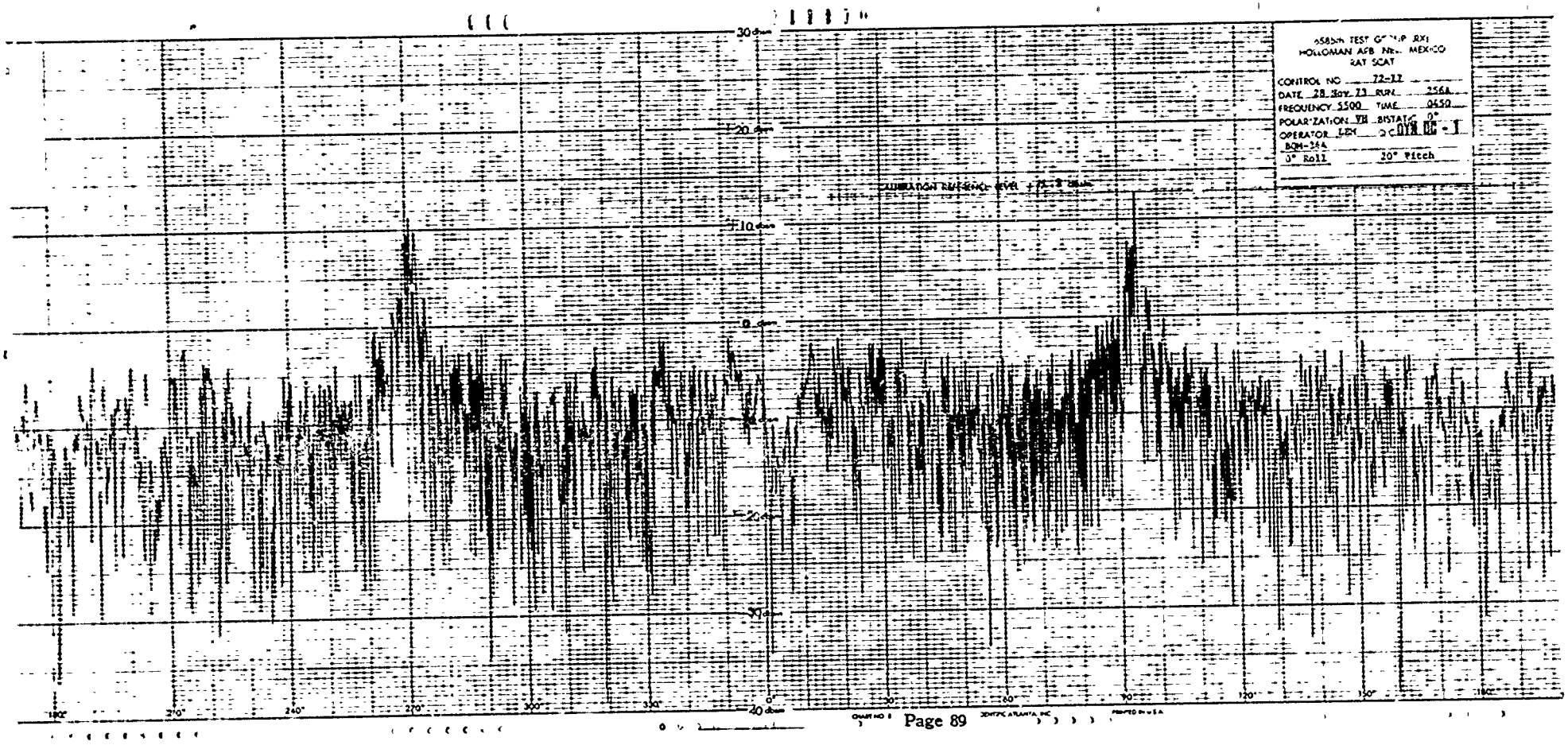

4583rd TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO
DATE 16 May 73
RUN
FREQUENCY 5550
TIME 1120
POLARIZATION
OPERATOR
30° Roll
10° Pitch
300°
330°
30°
60°
90°
120°
150°
180°

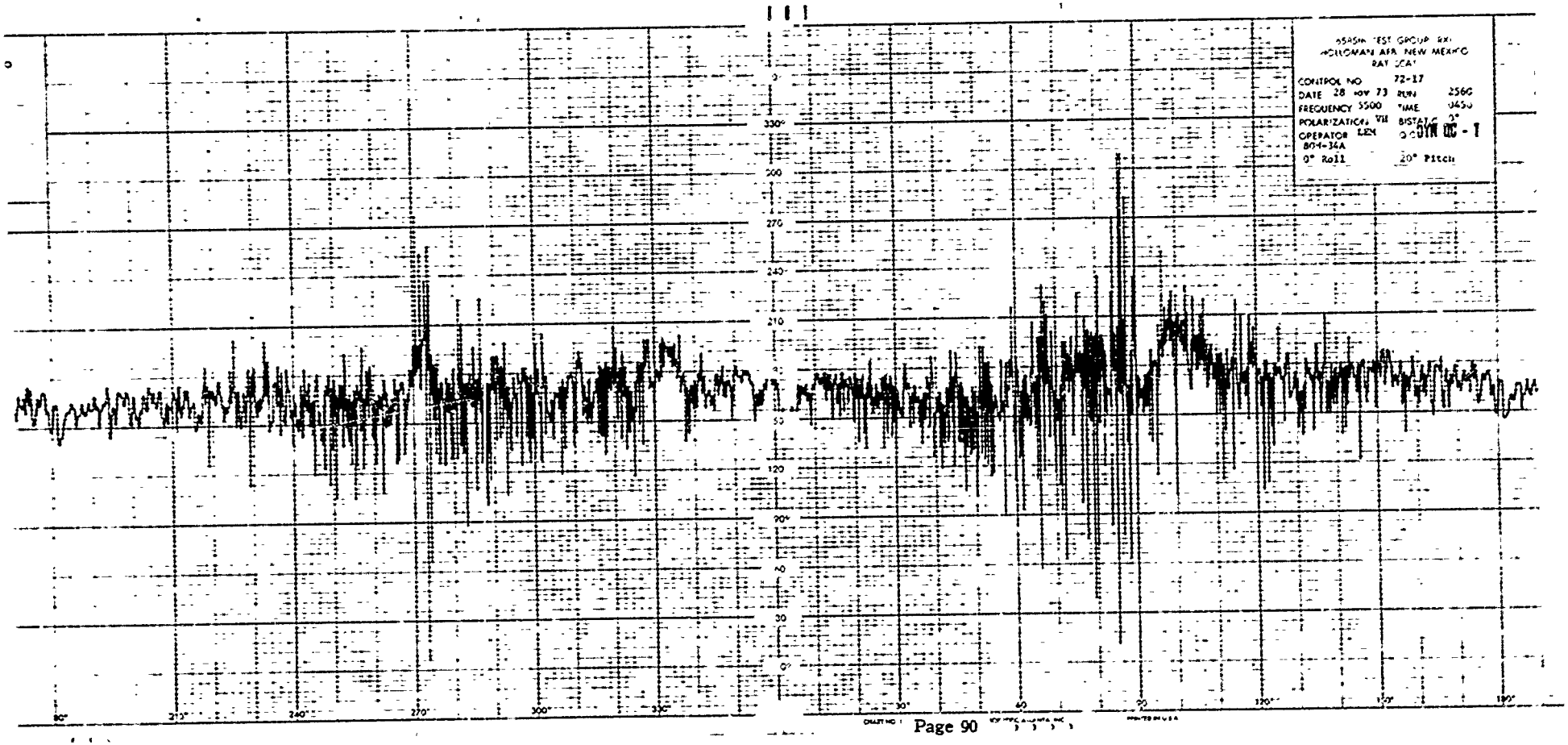

6585m EST GROUP RXI
HOLLOMAN AFB NEW MEXICO
CONTROL NO
DATE 22 Nov 73
FREQUENCY 5500
POLARIZATION
OPERATOR LEN
60M-34A
DYN OC - 1
+40
+30
+20
+10
0
-10
-20
-30

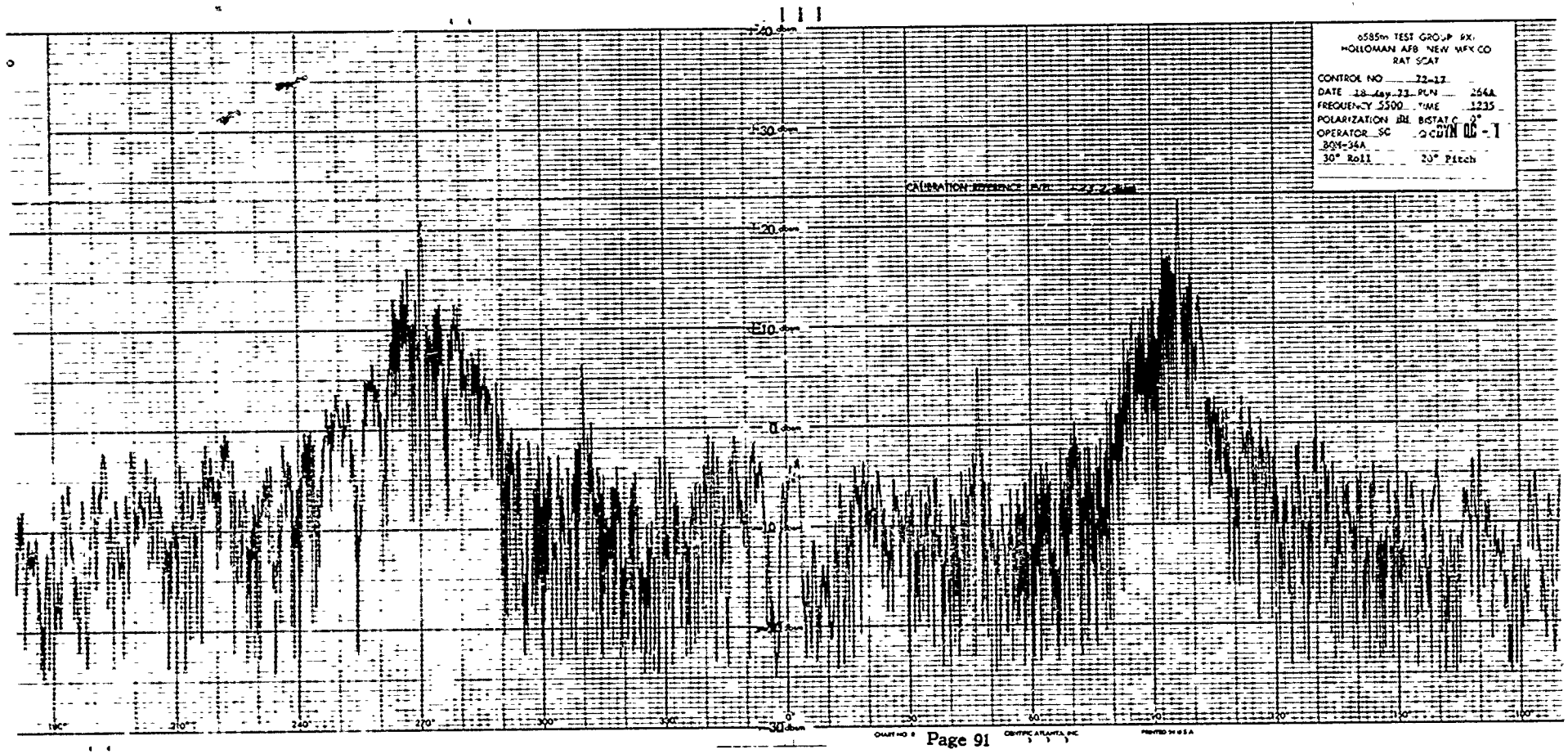

6585th TEST GROUP (RA)
HOLLOMAN AFB NEW MEXICO
PAT SCAT
CONTROL NO. 72-17
DATE 22 Nov 73
RUN 2540
FREQUENCY 5500
TIME 0340
POLARIZATION HH
BISTAT-C
OPERATOR LDK
DYNAMIC - 1
BDM-34A
0° Roll
20° Pitch
0°
330°
300°
270°
240°
210°
180°
150°
120°
90°
60°
30°
0°

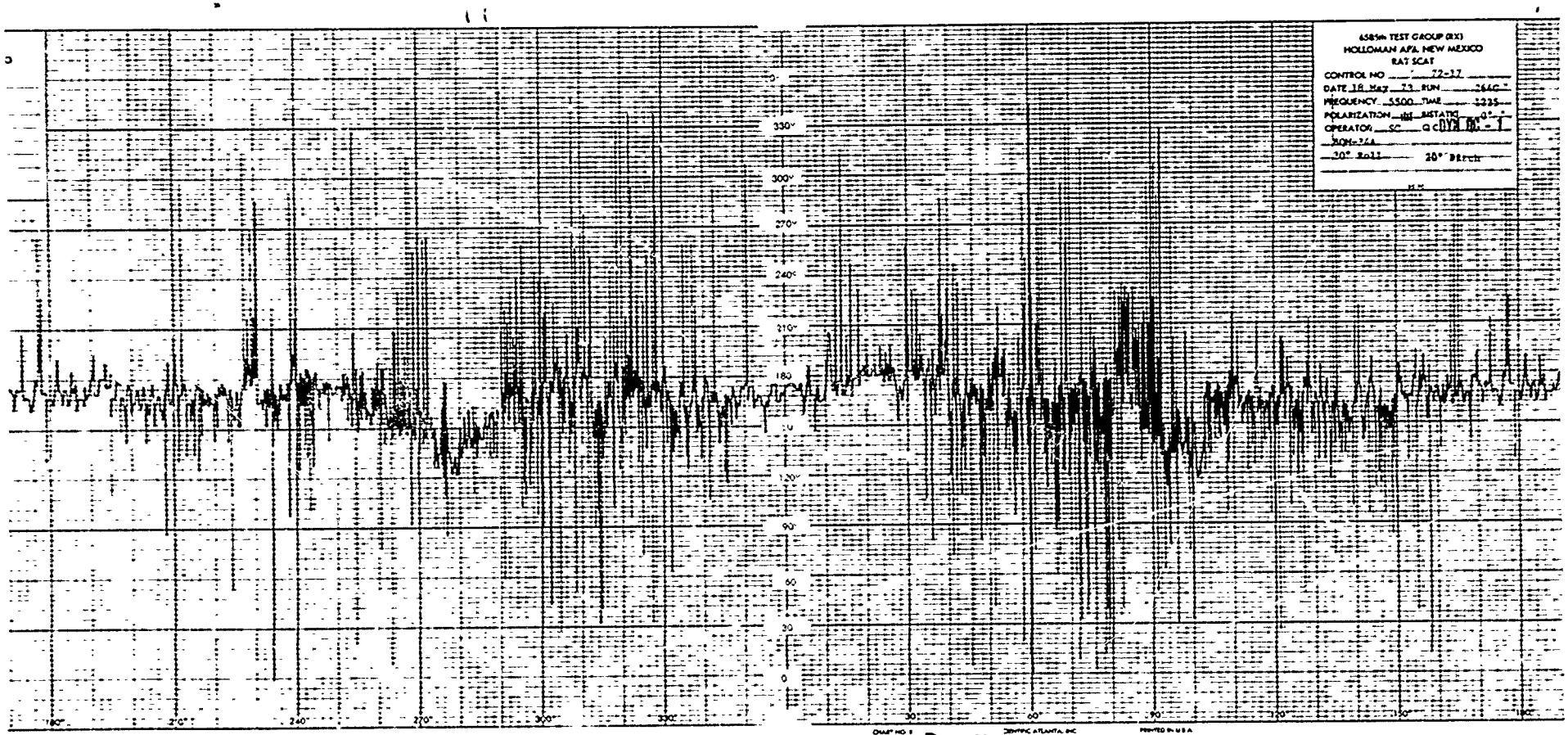

6585th TEST GROUP RAI
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-37
DATE 28 Nov 73 RUN 258A
FREQUENCY 5500 TIME 2530
POLARIZATION VV BISTAT C 0°
OPERATOR LEH
5021-34A
0° Roll 20° Pitch
CALIBRATION REFERENCE LEVEL
40
30
20
10
0
10
20
30
0°
30°
60°
90°
120°
150°
180°
210°
240°
270°
300°


CONTROL NO 22-27
DATE 28 Nov 73 RUN 1580
FREQUENCY 5520 TAPE 0530
OPERATOR LEN
BQM-34A
0° Roll 70° Pitch
DYN OC - 1
330
300
270
240
210
180
150
120
90
60
30
0


6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-32
DATE 28 Nov 73 RUN 256A
FREQUENCY 5500 TIME 0450
POLARIZATION VH BISTATIC 0°
OPERATOR LEW
BOM-34A
0° Roll
20° Pitch
30 dbsm
20 dbsm
10 dbsm
0 dbsm
-10 dbsm
-20 dbsm
-30 dbsm
-40 dbsm
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°


6585th TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
RAY SCAT
CONTROL NO 72-17
DATE 28 Nov 73 RUN 2560
FREQUENCY 5500 TIME 0450
POLARIZATION VH BISTATIC 0°
OPERATOR LEN CYN DC - 1
804-34A
0° Roll 20° Pitch
330°
300°
270°
240°
210°
120°
90°
60
30
0°
80°
240°
270°
300°
330°
30°
60
90
120°
150°
180°


6585m TEST GROUP 9X
HOLLOMAN AFB NEW MEX CO
RAT SCAT
CONTROL NO 72-17
DATE 18 May 73 RUN 256A
FREQUENCY 5500 TIME 1235
POLARIZATION HH BISTAT C 0°
OPERATOR SC
304-36A
30° Roll 20° Pitch
CALIBRATION REFERENCE
+40 dbsm
+30 dbsm
+20 dbsm
+10 dbsm
0 dbsm
-10 dbsm
-30 dbsm
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°


6585th TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 18 May 73 RUN 2640
FREQUENCY 5500 TIME 1235
POLARIZATION HH BISTATIC 0°
OPERATOR SC
ROM-74A
-30° Roll
20° Pitch
330°
300°
270°
240°
210°
180
150°
120°
90°
60
30
0
30°
60°
90°
120°
150°
180°
CHART NO. 1
ZEROTEC ATLANTA, INC.
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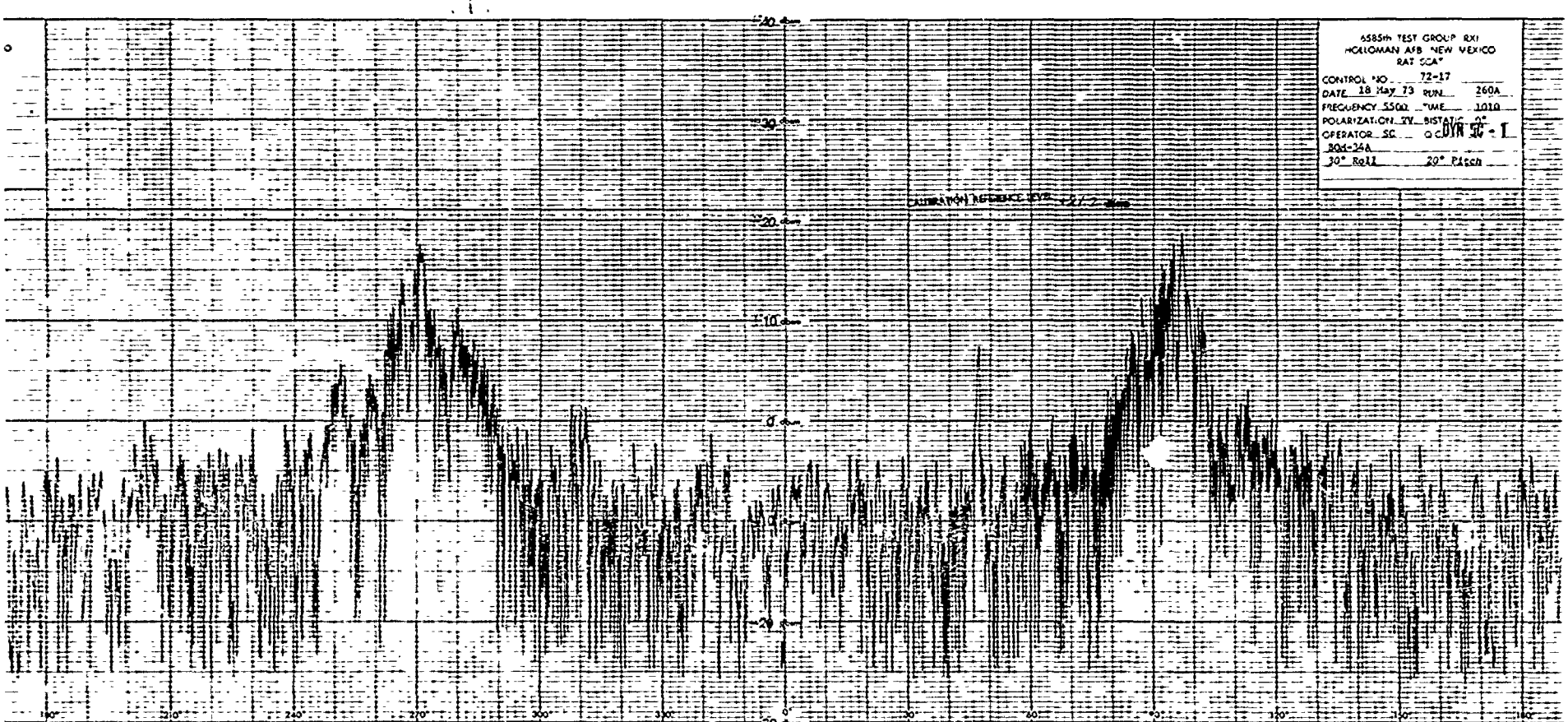
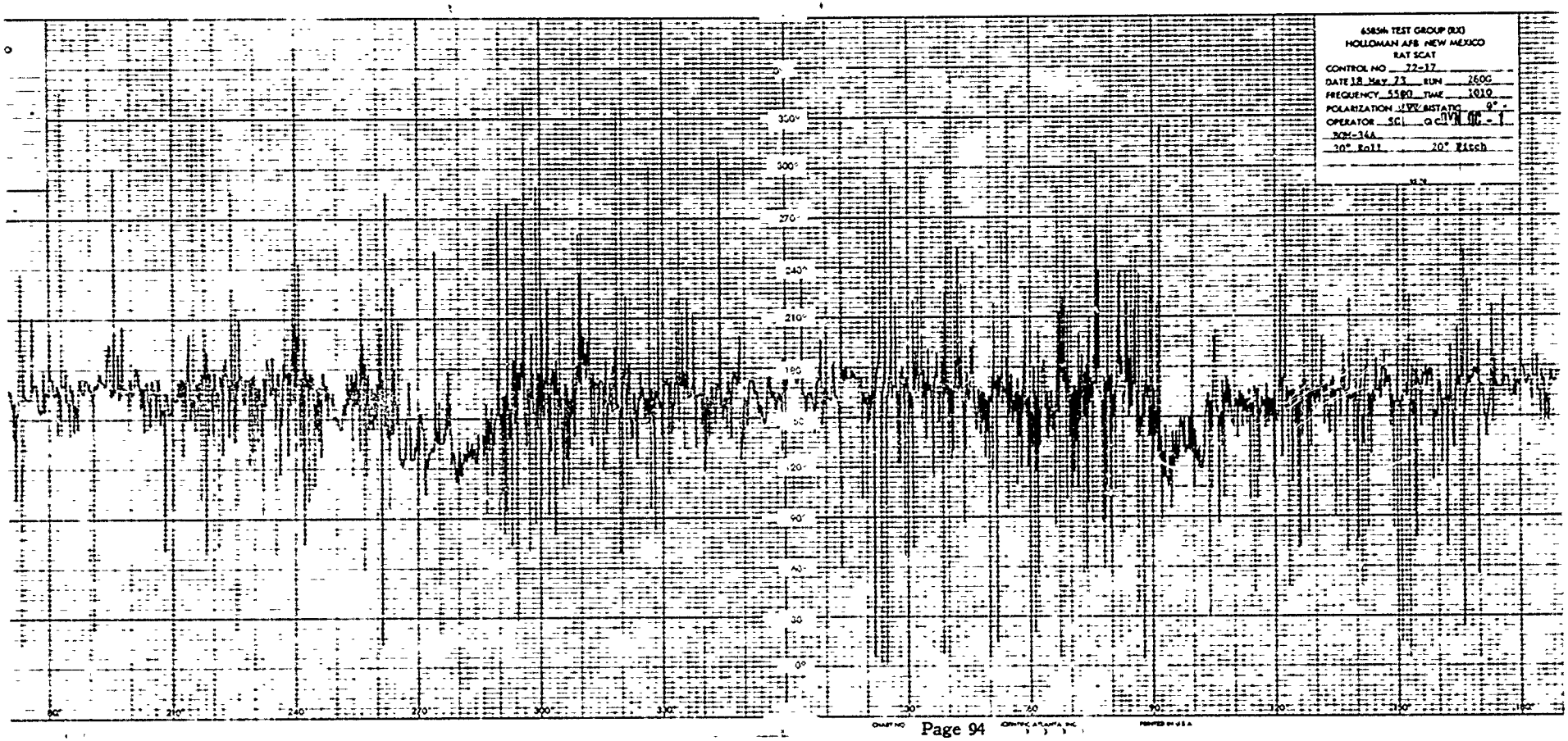
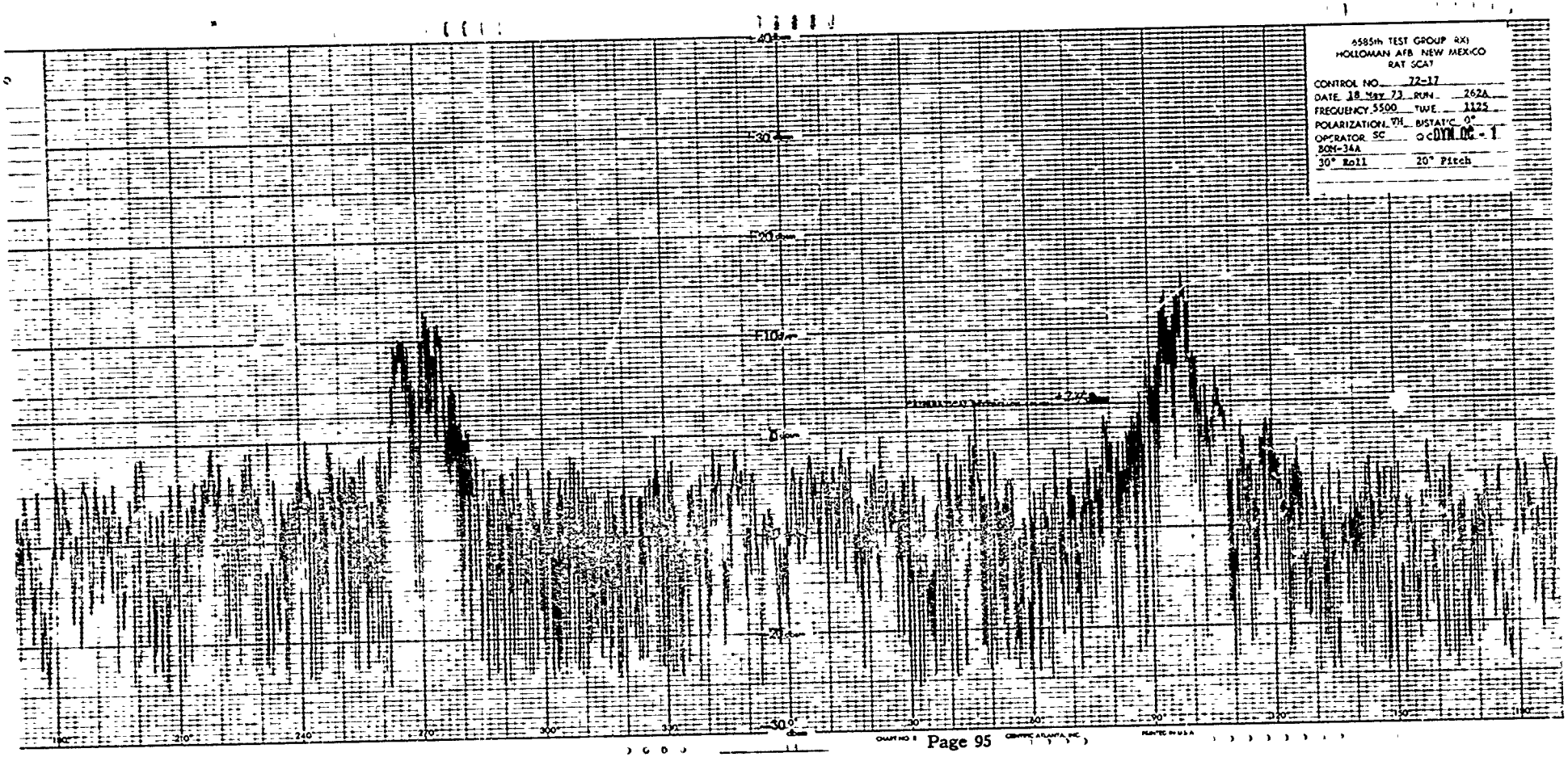
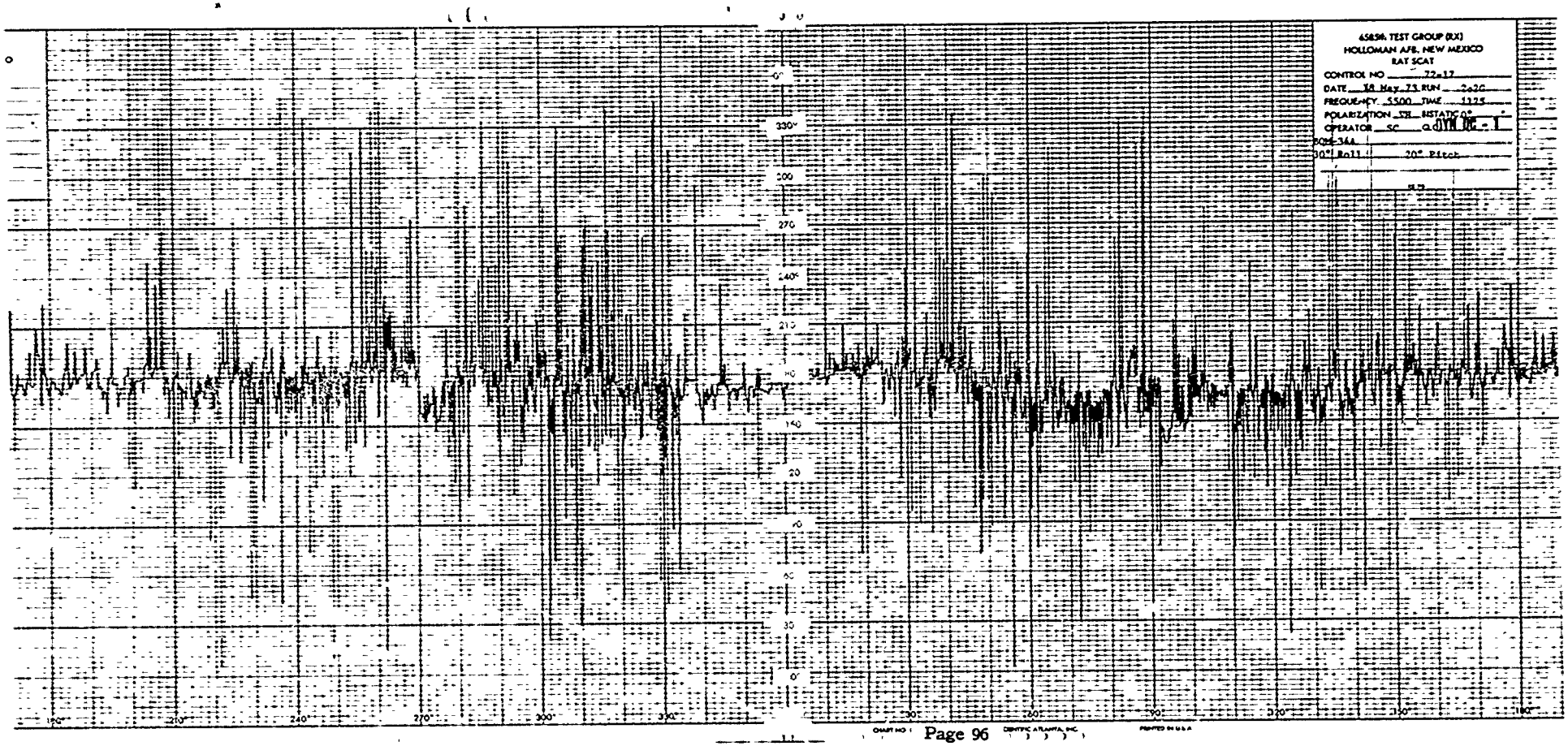
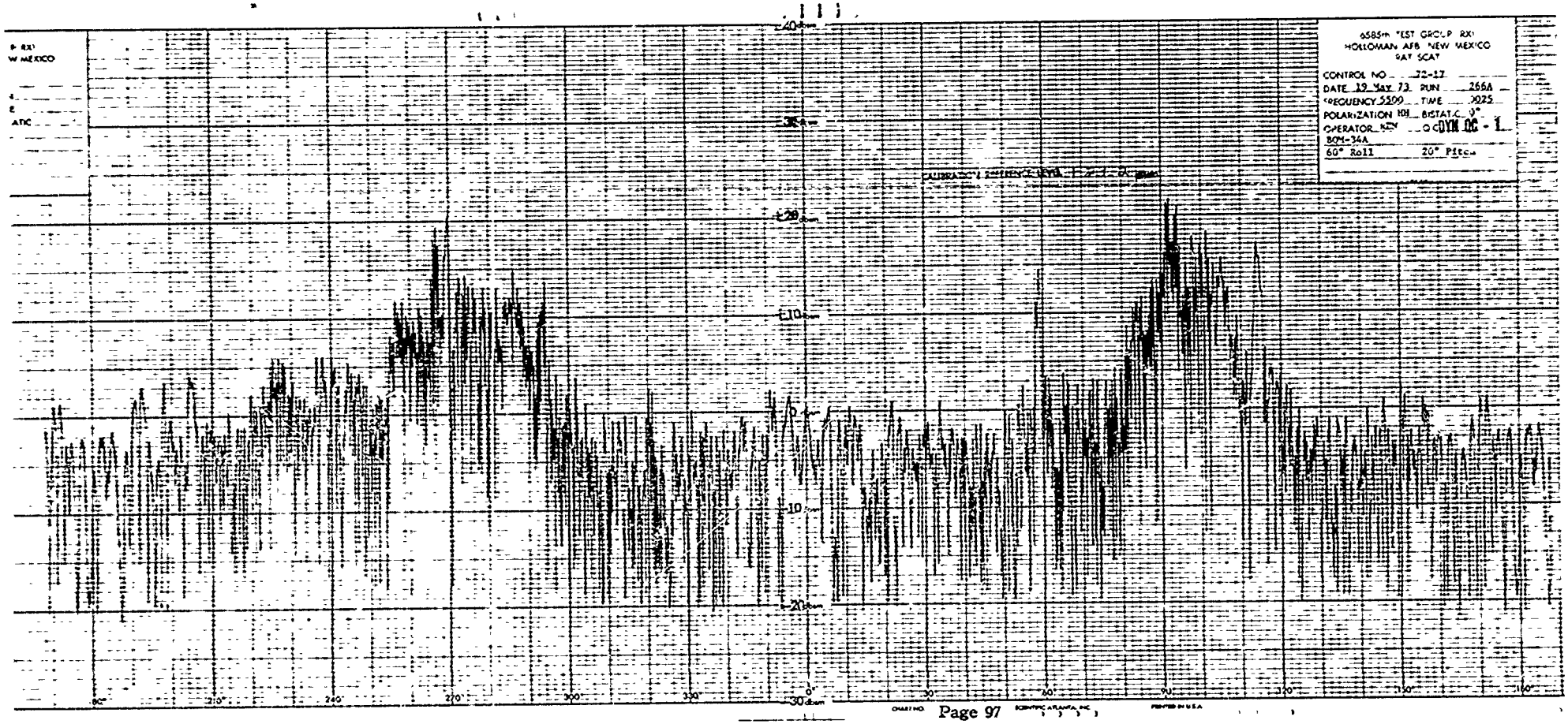
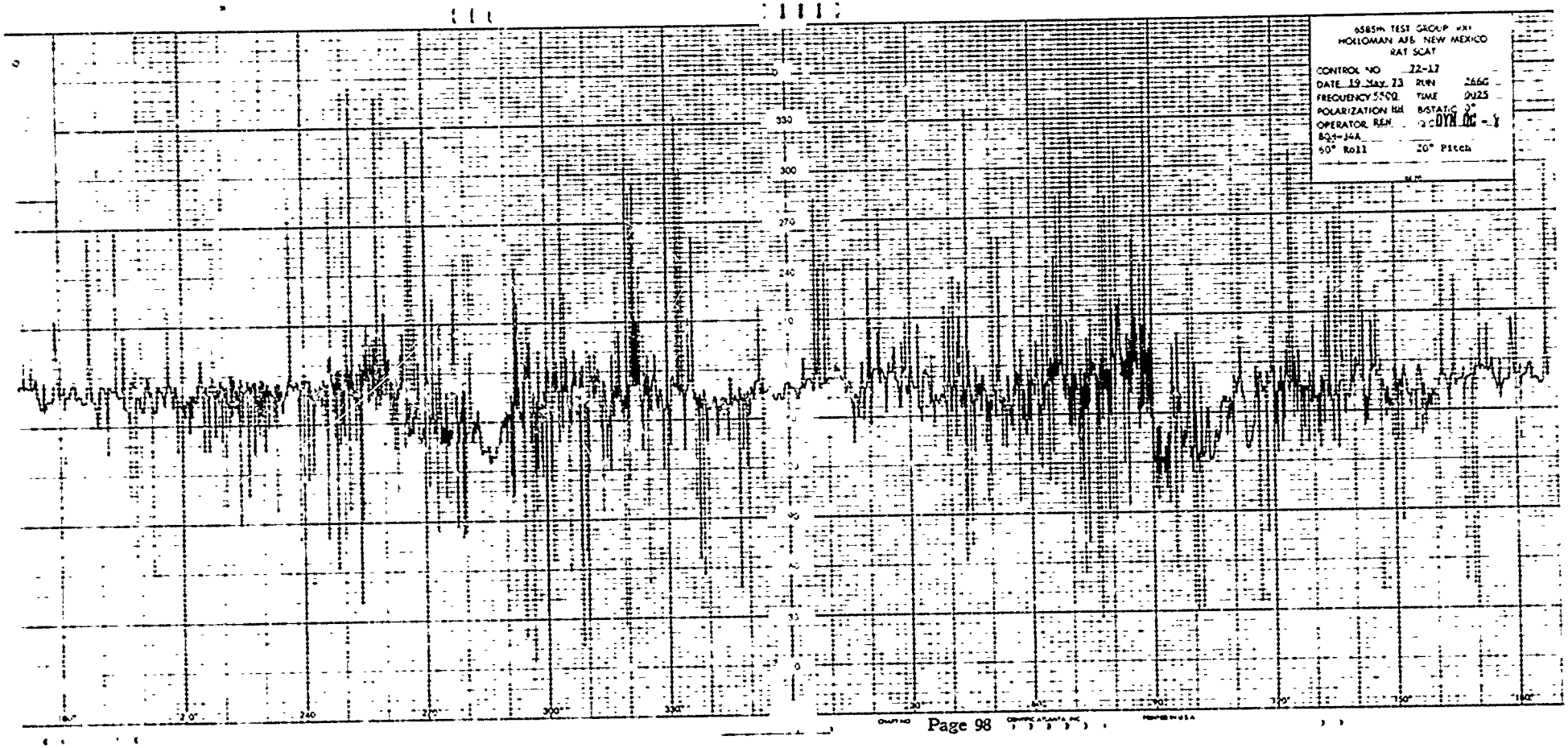

6585th TEST GROUP RXI
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 18 May 73 RUN 260A
FREQUENCY 5500 TIME 1010
POLARIZATION VV BISTATIC 0°
OPERATOR SC
30° Roll 20° Pitch
-10 dbsm
-20 dbsm
-30 dbsm
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

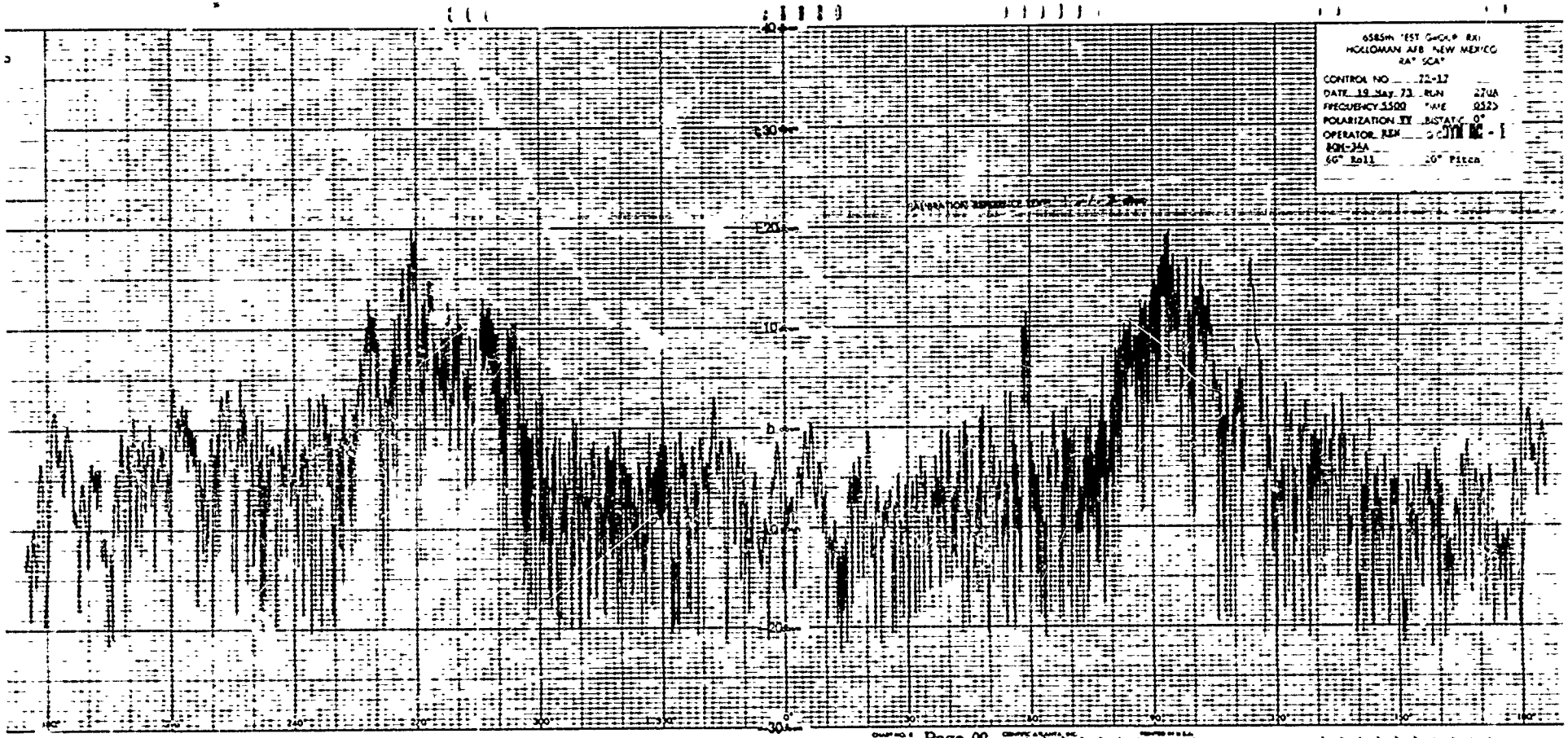

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 18 May 73 RUN 2600
FREQUENCY 5580 TIME 1019
POLARIZATION VV/STATIC 9°
OPERATOR SGT
XM-34A
20° Roll 20° Pitch
360°
300°
270°
240°
210°
180°
150°
120°
90°
60°
30°
0°

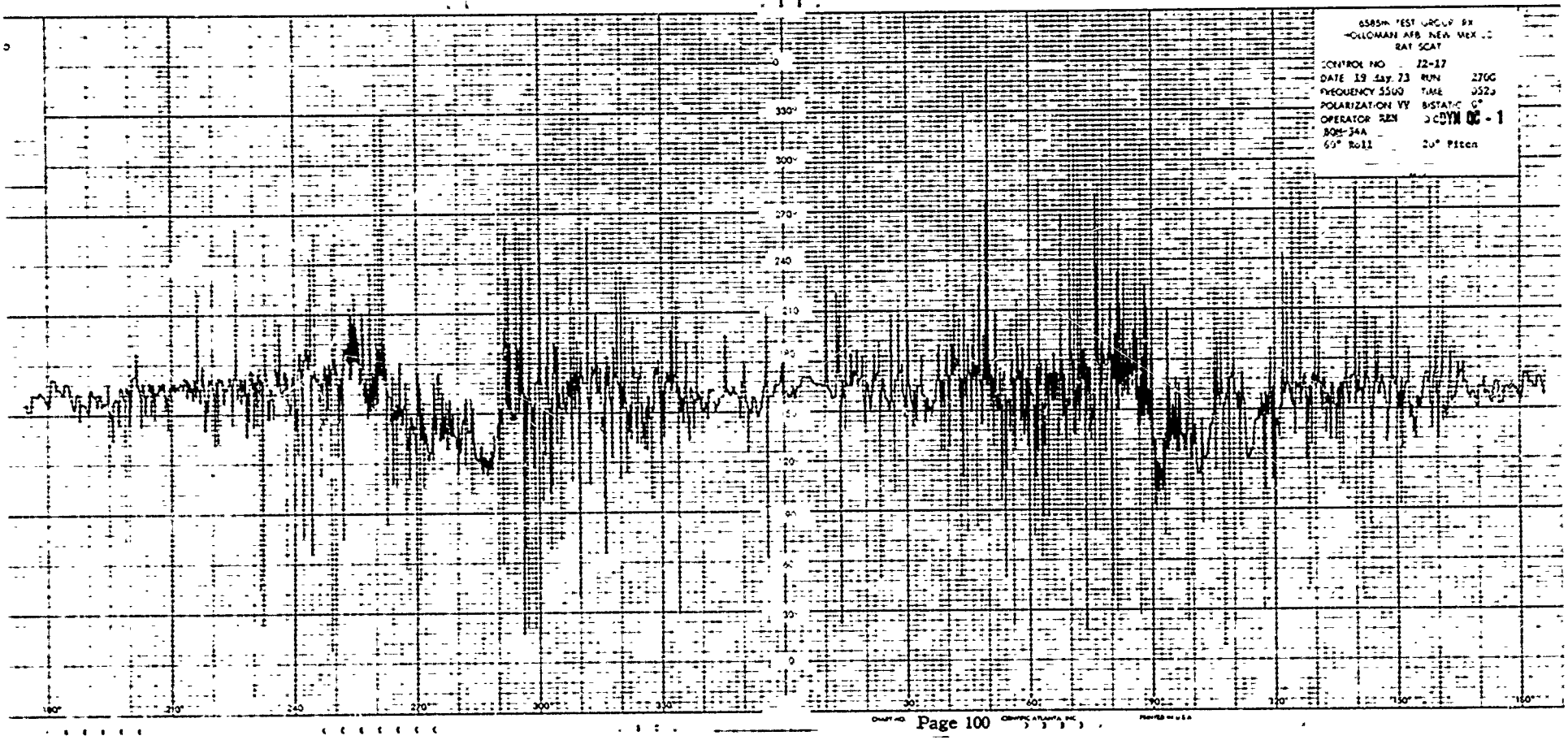

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO. 72-17
DATE 18 May 73 RUN 262A
FREQUENCY 5500 TWE 1125
POLARIZATION VH BISTATIC 0°
OPERATOR SC
BSN-34A
30° Roll 20° Pitch
-30
-50.0
210°
240°
270°
300°
330°
30°
90°
150°

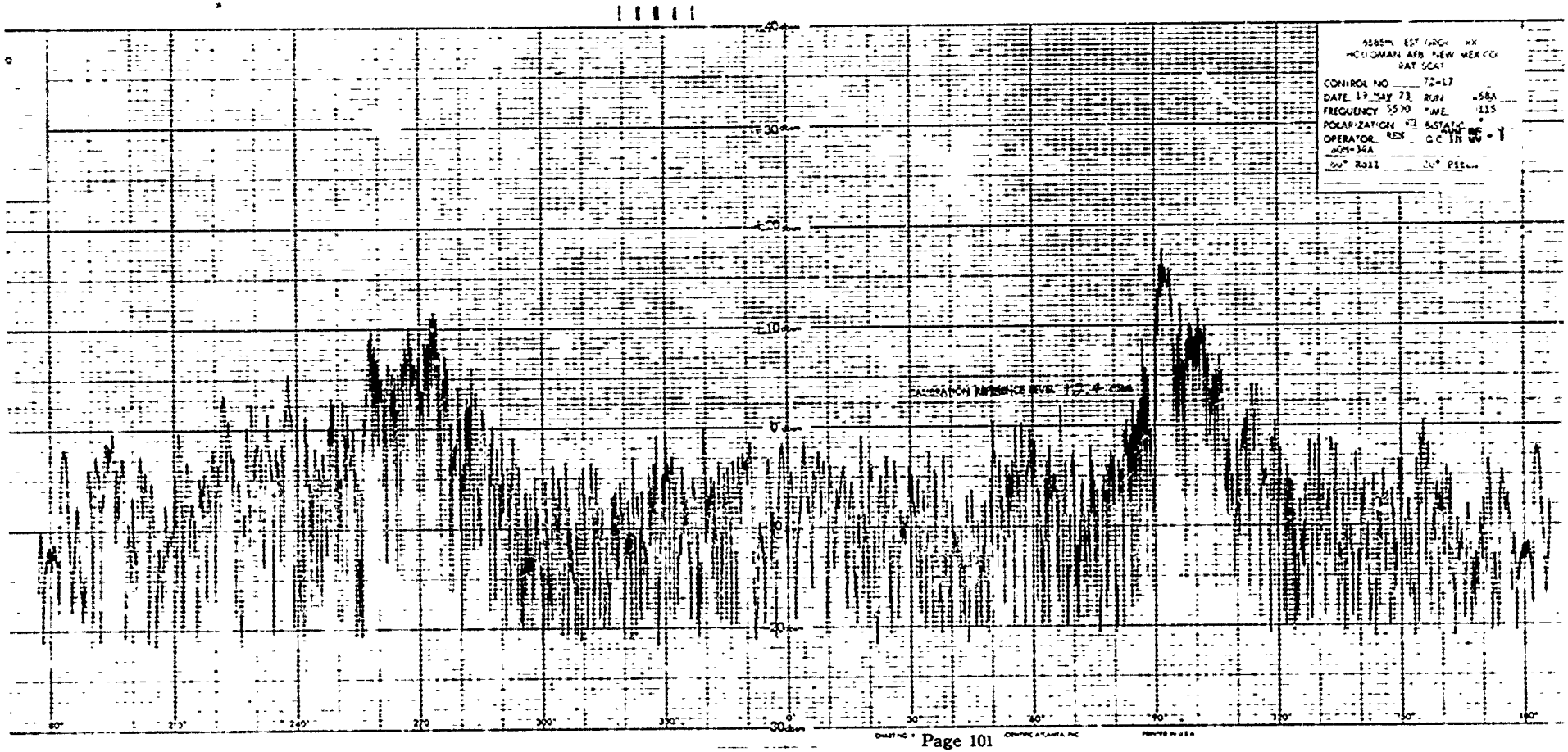

45836 TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 18 May 73 RUN 2020
FREQUENCY 5500 TIME 1125
POLARIZATION VPL BISTATIC 0°
OPERATOR SC
30° Roll 20° Pitch
0°
330°
300
270
240°
210
180
150
120
90
60
30
0°
150°
210°
240°
270°
300°
330°
360°
30°
60°
90°
120°
150°
180°

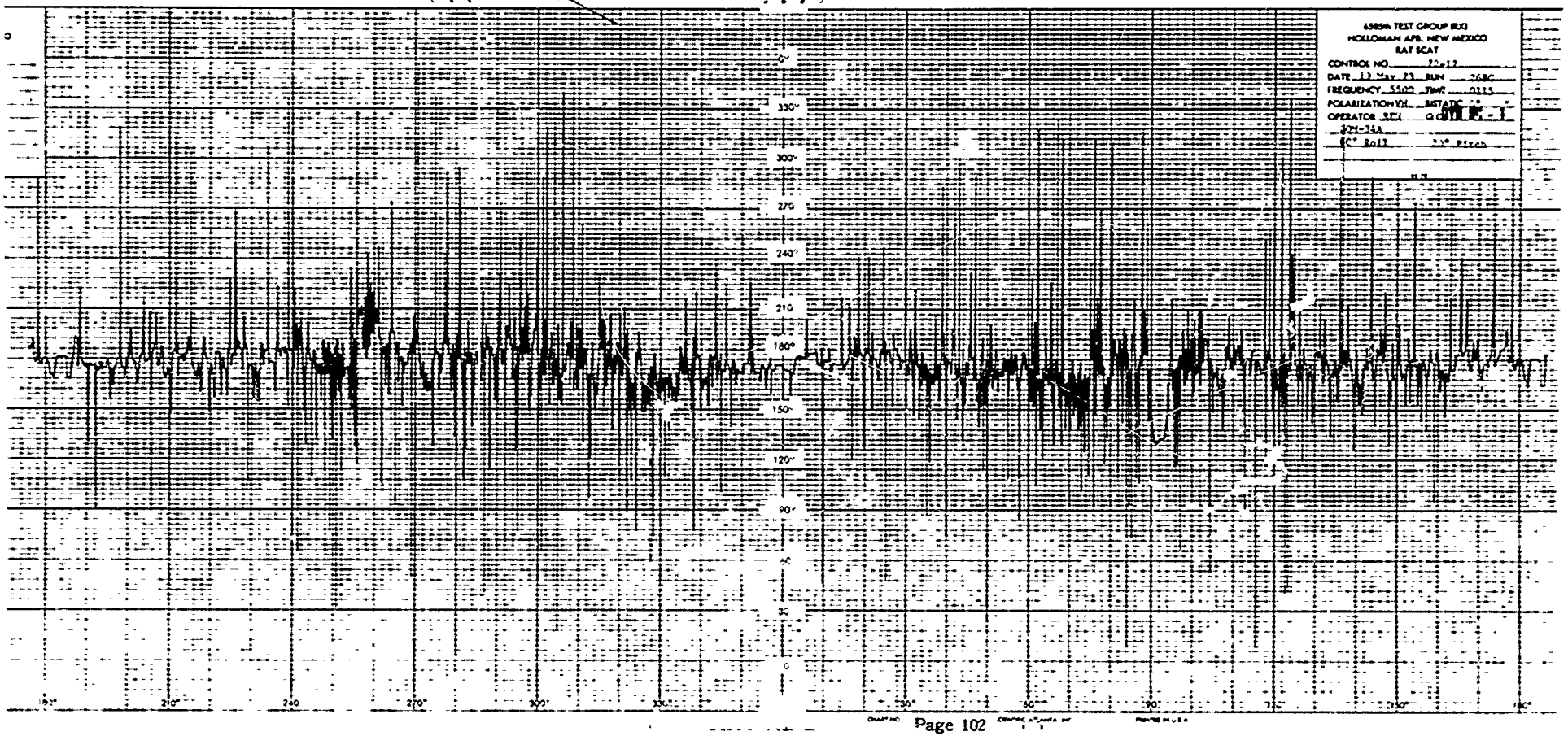

6585m TEST GROUP RX1
HOLLOMAN AFB NEW MEXICO
RAY SCAT
CONTROL NO 72-17
DATE 19 May 73 RUN 266A
FREQUENCY 5500 TIME 0025
POLARIZATION HH BISTAT C 0°
OPERATOR NCV
BOM-34A
60° Roll 20° Pitch
-40
-30
-20
-10
0
10
20
30
0°
30°
60°
90°
120°
150°
180°
210°
240°
270°
300°
330°

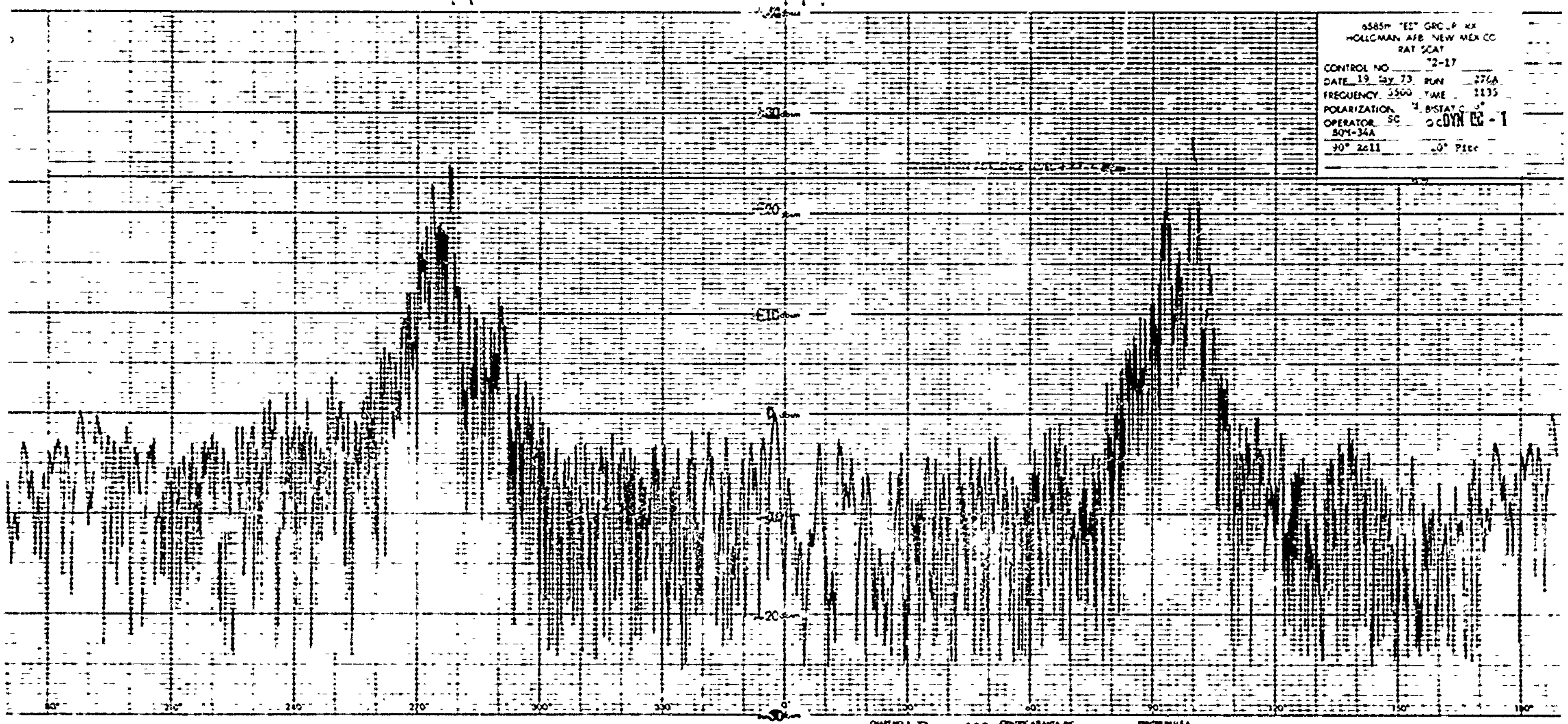

6585th TEST GROUP RTI
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 22-17
DATE 19 May 73 RUN 2660
FREQUENCY 5500 TIME 0025
POLARIZATION HH BISTATIC 2°
OPERATOR REN
BQ1-34A
60° Roll 20° Pitch
330
300
270
240
210
180
150
120
90
60
30
0
180°
210°
240°
270°
300°
330°
30°
60°
90°
120°
150°
180°

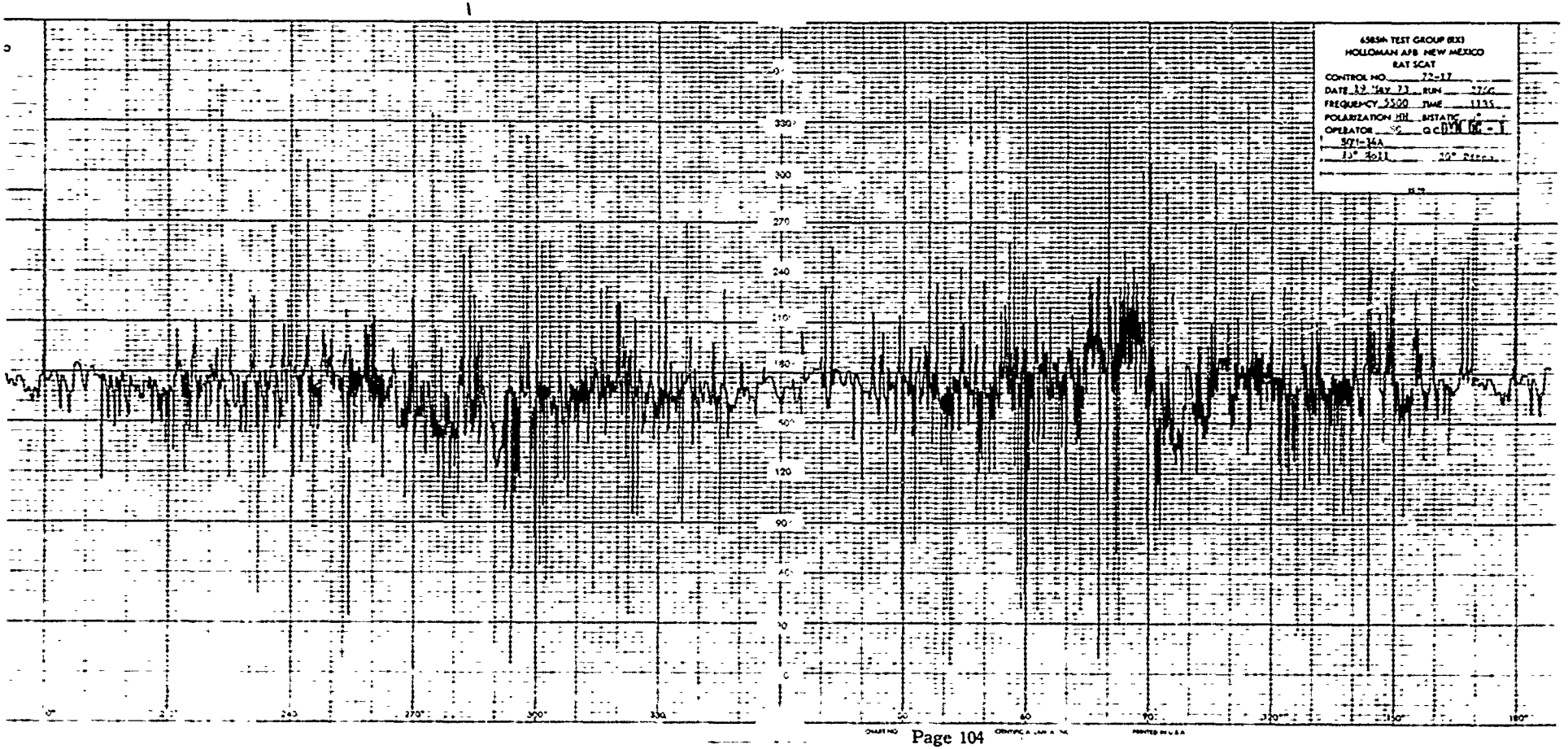

6585th TEST GROUP RKI
HOLLOMAN AFB NEW MEXICO
24" SCA"
CONTROL NO 72-17
DATE 19 May 73 RUN 27UA
FREQUENCY 5500 TAPE 0527
POLARIZATION VV BASTAT C 0°
OPERATOR REN
RCH-34A
60° Roll 20° Pitch
40
30
20
10
0
-10
-20
-30
0°
30°
60°
90°
120°
150°
180°
210°
240°
270°
300°
330°

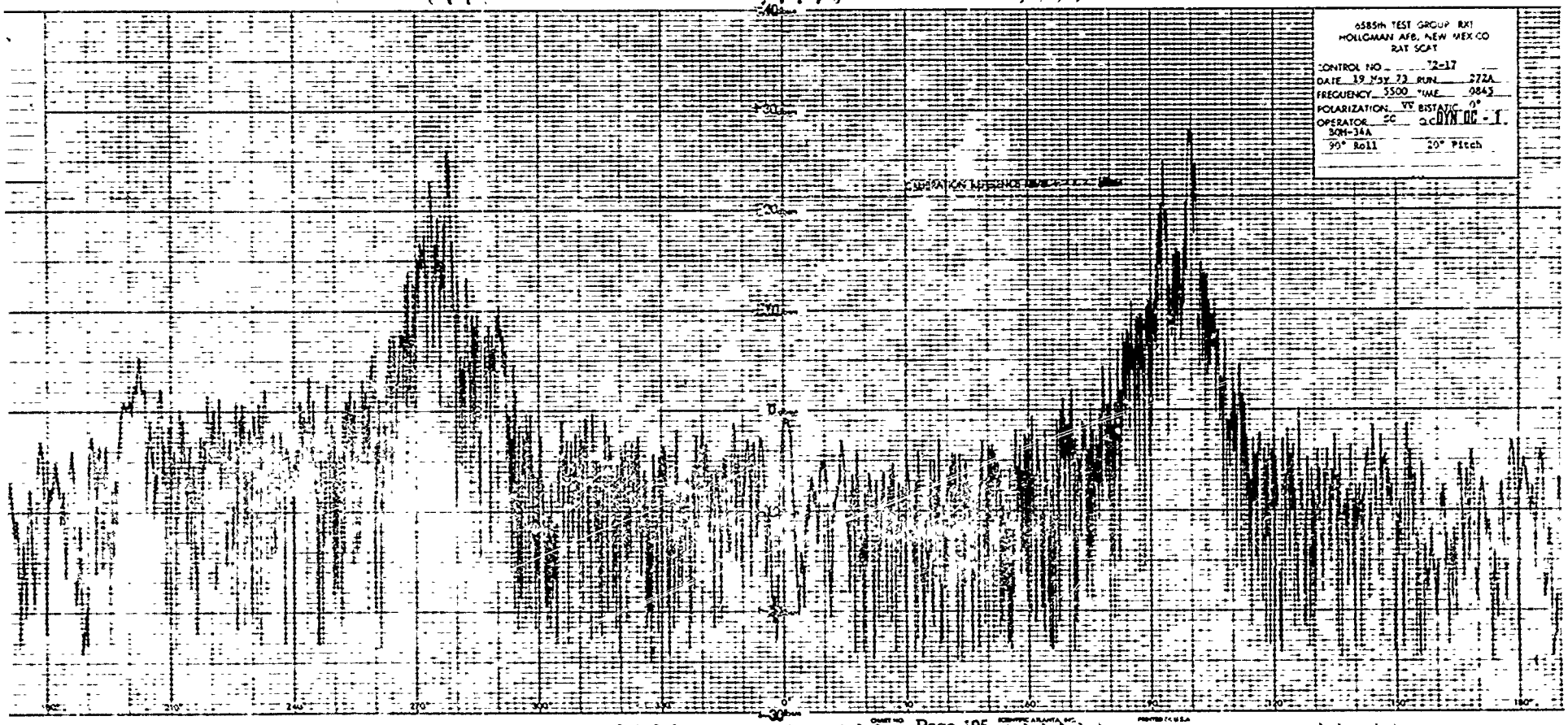

6585th TEST GROUP PX
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO. J2-17
DATE 19 Sep. 73 RUN 2700
FREQUENCY 5500 TIME 0522
POLARIZATION VV BISTATIC 0°
OPERATOR REN
80M-34A
69° Roll 20° Pitch
CDYN QC - 1
330°
300°
270°
240
210
180
150
120
90
60
30
0
180°
210°
240
270°
300°
330°
30°
60°
90°
120
150°
180°

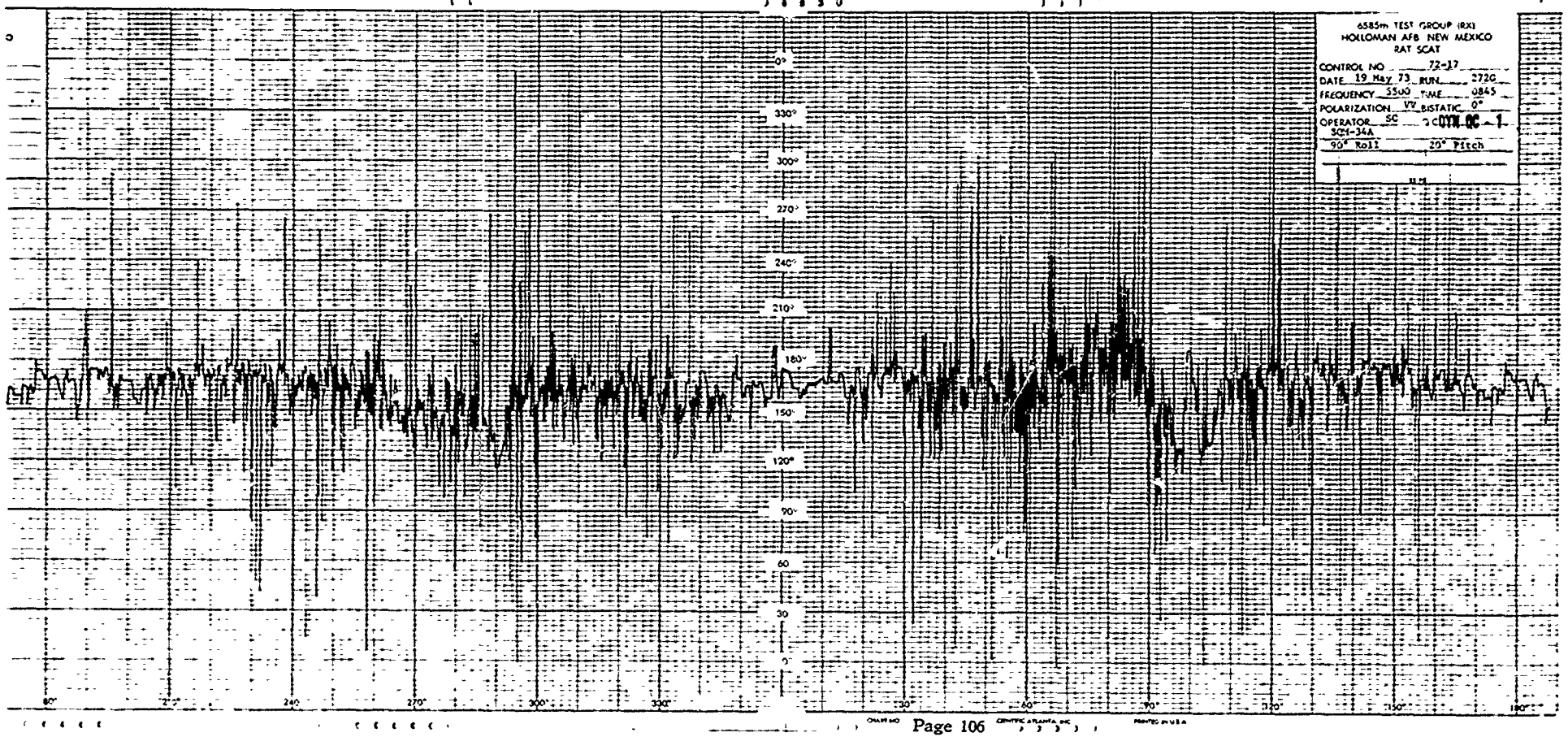

9585m EST (ARCH XX
HOLLOMAN AFB NEW MEX CO
RAT SCAT
CONTROL NO 72-17
DATE 19 MAY 73 RUN 68A
FREQUENCY 5570 TIME 1135
POLARIZATION VV BISTATIC
OPERATOR RESS QC TH
40M-34A
00° Roll 00° Pitch
+40
+30
+20
+10
0
-10
-20
-30
60°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

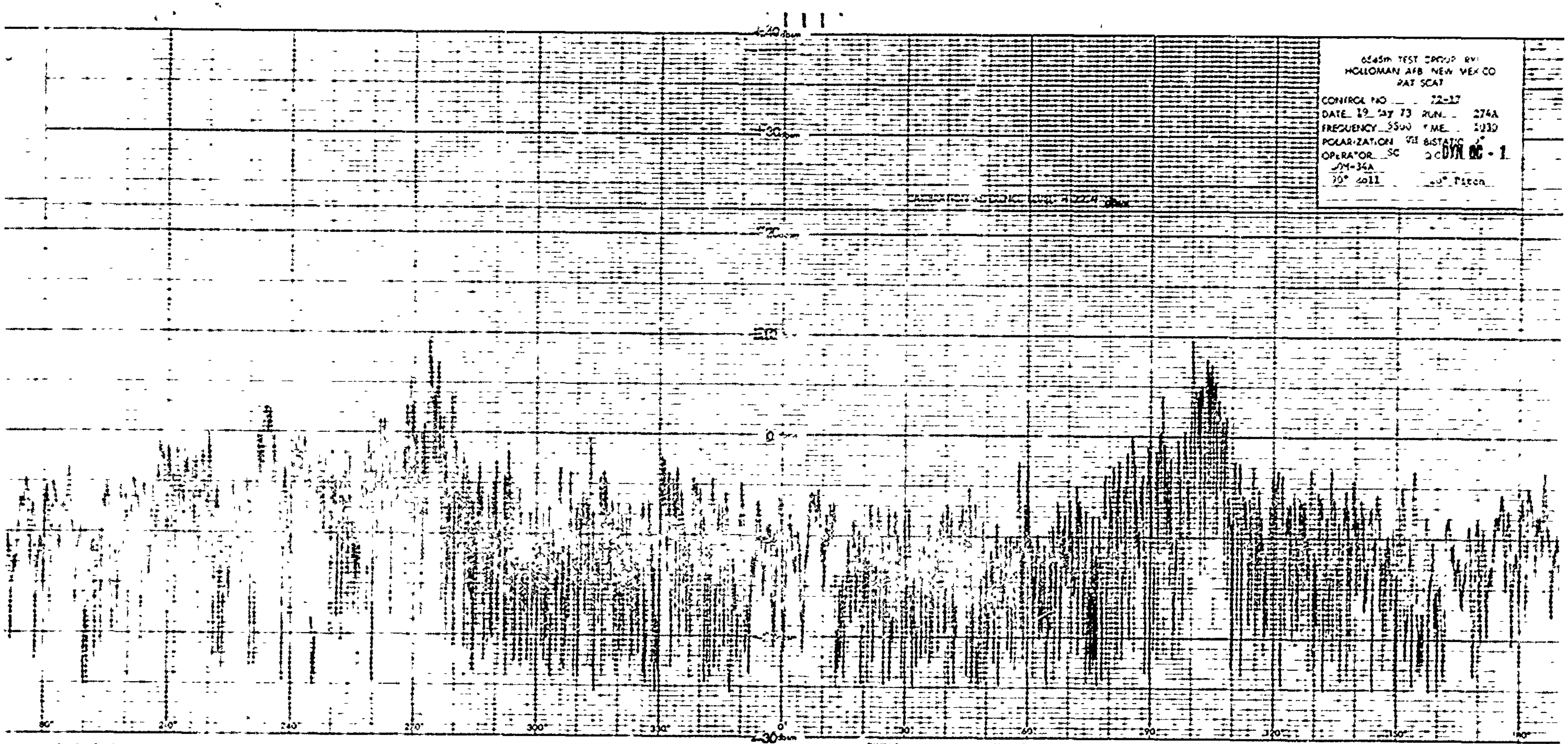

6585th TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO. 72-12
DATE 13 May 73 RUN 0680
FREQUENCY 5500 TIME 0115
POLARIZATION VH BISTATIC 0°
OPERATOR SFC( ) G
3CM-34A
0° Roll 33° Pitch
0°
330°
300°
270°
240°
210°
180°
150°
120°
90°
60°
30°
0°
210°
240°
270°
300°
330°
30°
60°
90°
150°

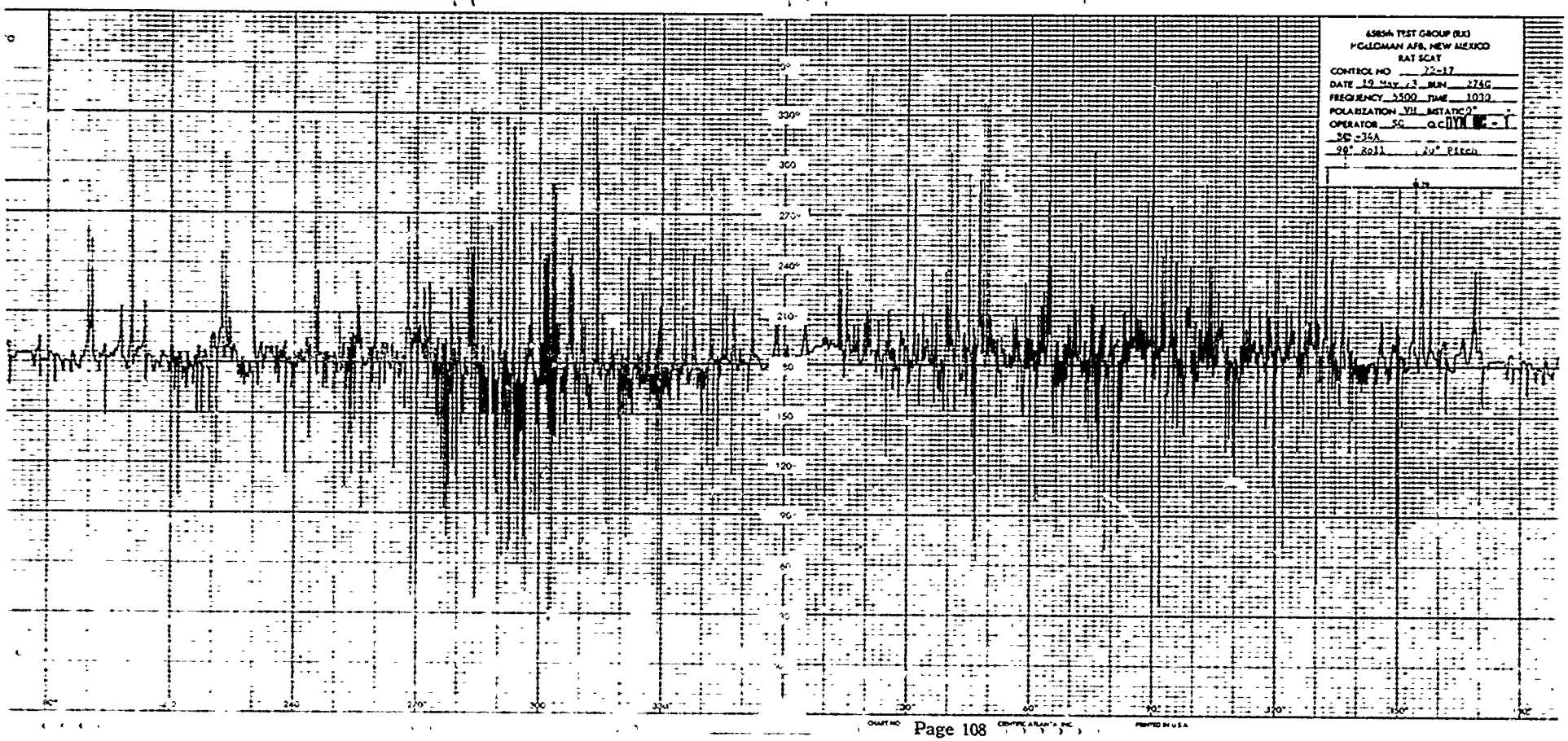

6585th "ES" GROUP XX
HOLLOMAN AFB NEW MEX CO
RAT SCAT
CONTROL NO 72-17
DATE 19 May 73 RUN 276A
FREQUENCY 3500 TIME 1135
POLARIZATION BISTAT 0°
OPERATOR SC
cDYN CC - 1
0° Pitc
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

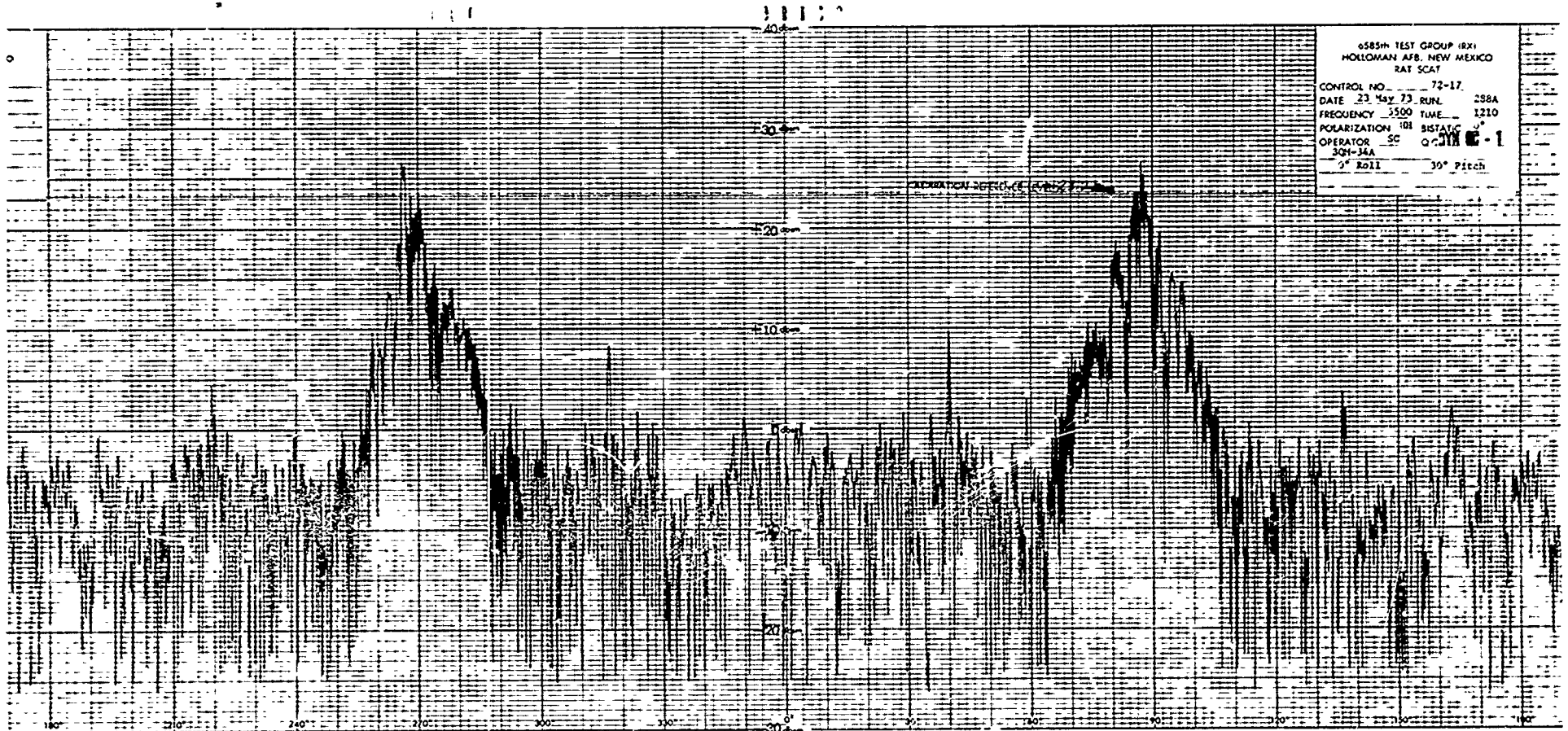

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 19 May 72 RUN 2726
FREQUENCY 5500 TIME 1135
POLARIZATION HH BISTATIC °
OPERATOR C
571-14A
13° Roll 20° Pitch
330°
300
270
240
210°
180°
150
120
90°
60
30
0°
270°
300°
330
50
60
70
320°
340°
180°

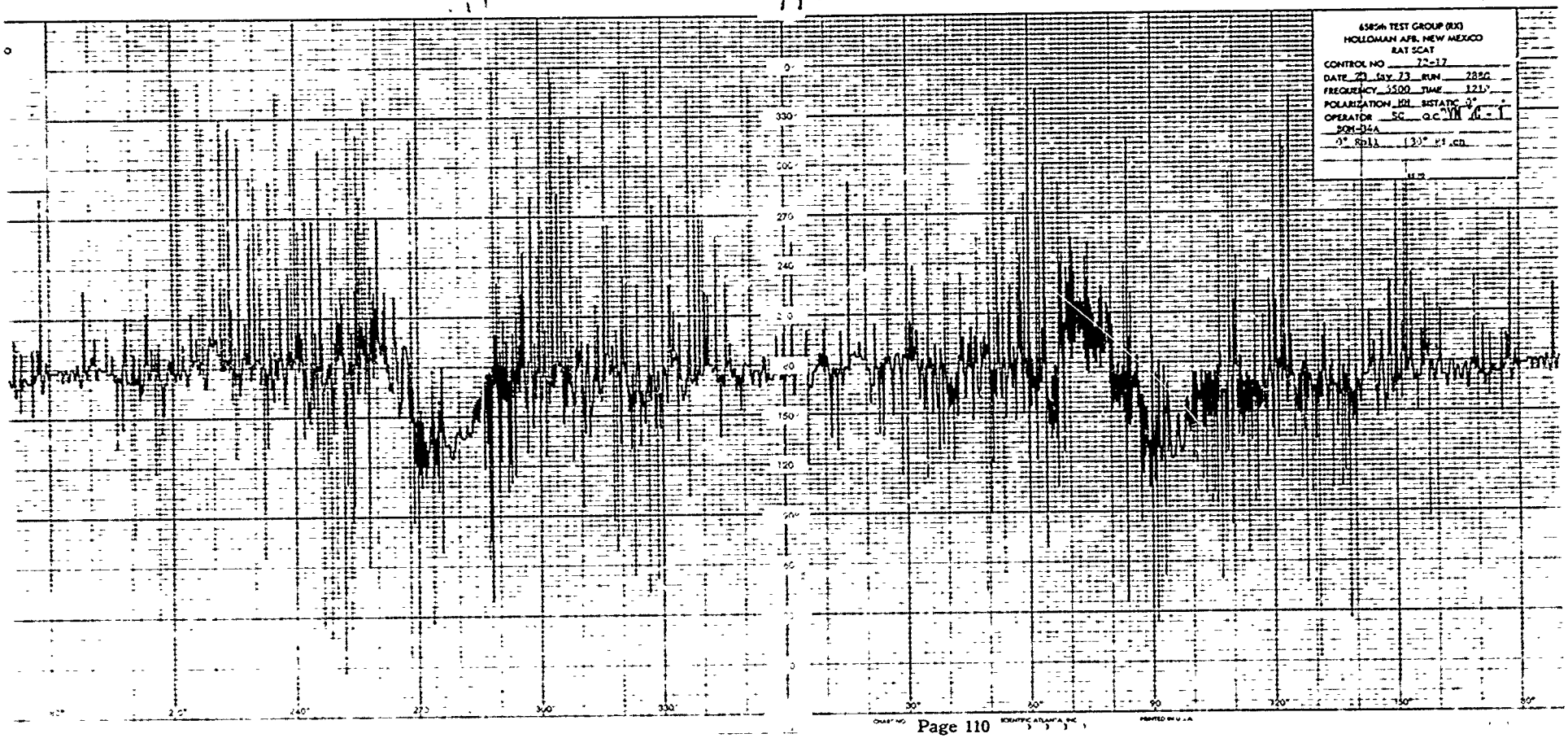

6585th TEST GROUP RXT
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO - 72-17
DATE 19 May 72 RUN 272A
FREQUENCY 5500 TIME 0845
POLARIZATION VV BISTATIC 0°
OPERATOR SC
SOM-34A
90° Roll
20° Pitch
QC DYN QC - 1
-40dbsm
-30dbsm
-20dbsm
-10dbsm
0dbsm
-30°
0°
180°

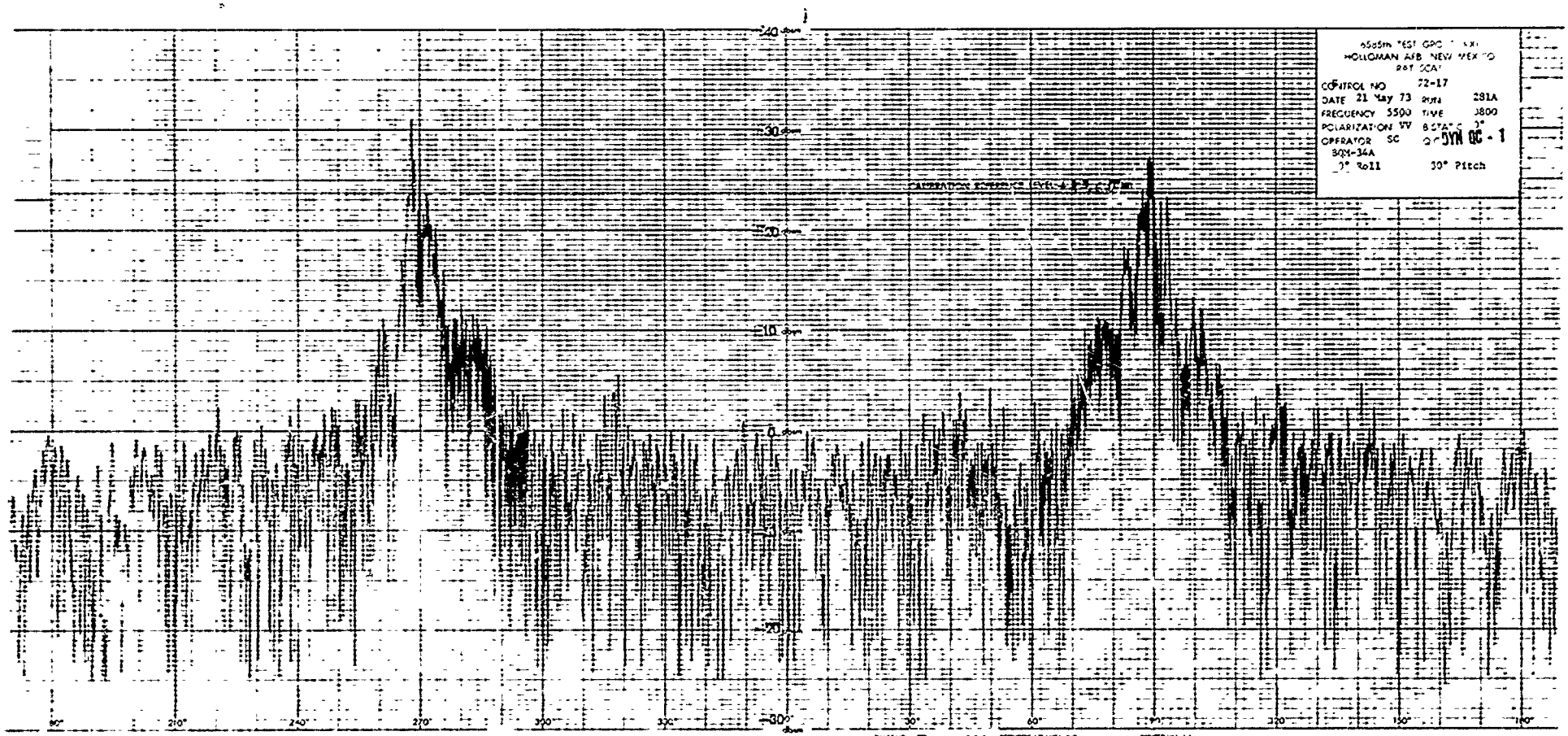

6585m TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 19 May 73 RUN 2720
FREQUENCY 5500 TIME 0845
POLARIZATION VV BISTATIC 0°
OPERATOR SC
SCM-34A
90° Roll 20° Pitch
0°
330°
300°
270°
240°
210°
180°
150°
120°
90°
60
30
0°
60°
240
270°
300°
330°
30°
60°
90°
120°
150°
180°

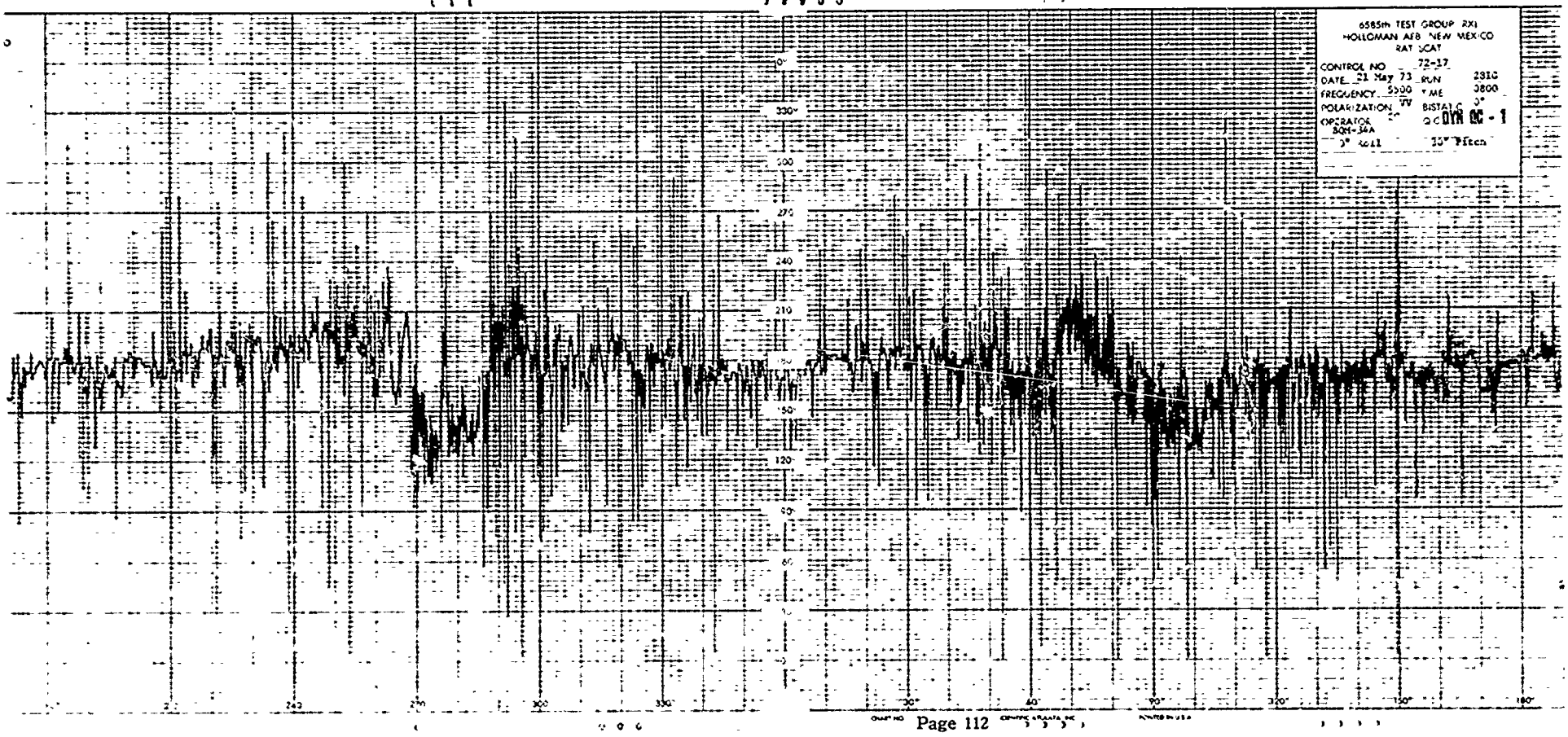

6545th TEST GROUP RY
HOLLOMAN AFB NEW MEX CO
RAT SCAT
CONTROL NO 72-17
DATE 19 May 73 RUN 274A
FREQUENCY 5500 TIME 1010
POLARIZATION VH BISTATIC
OPERATOR SC
DYN AC - 1
+40 dbsm
+30 dbsm
+20 dbsm
0
-30 dbsm
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

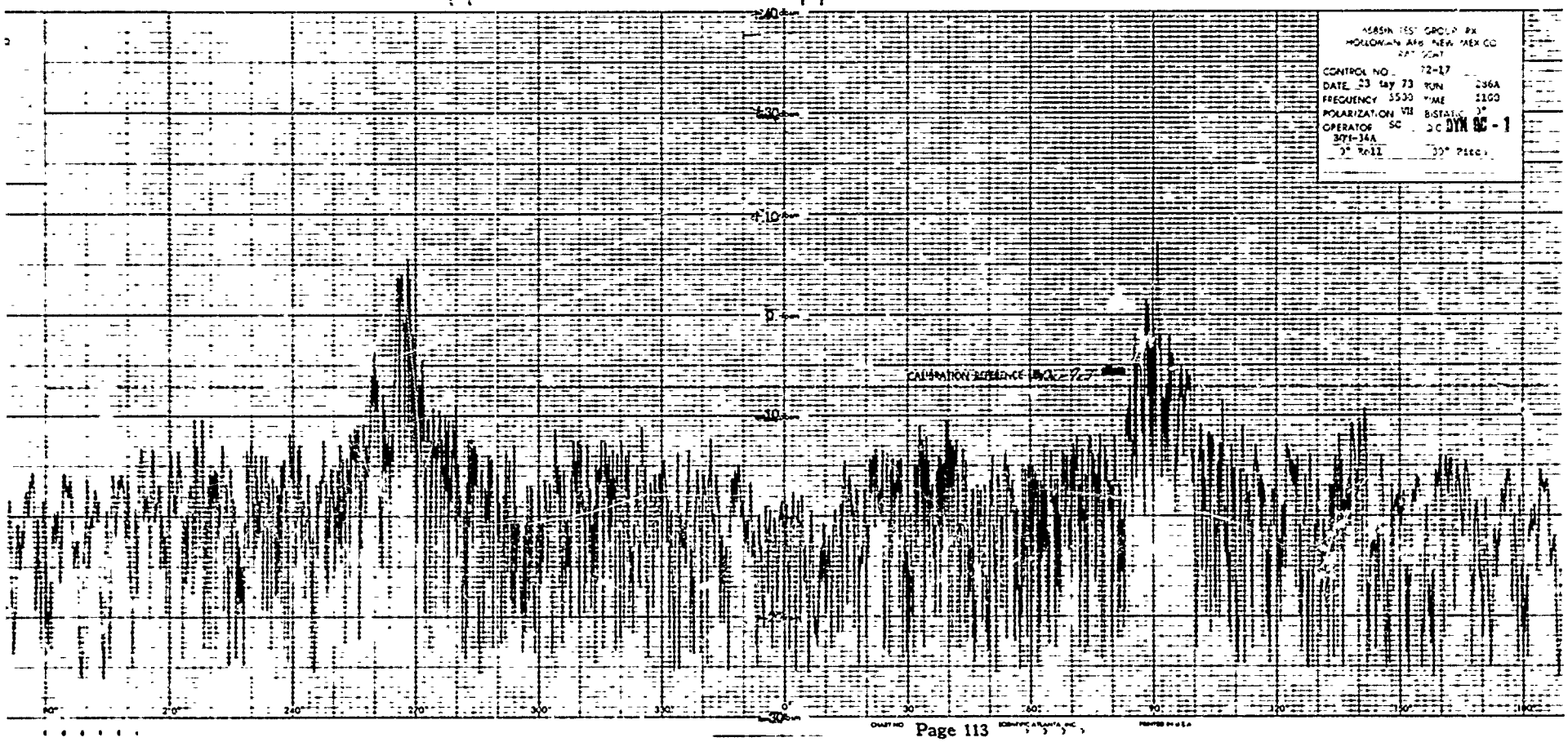

6585th TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO 22-17
DATE 19 May 72 RUN 2746
FREQUENCY 9500 TIME 1030
POLARIZATION VH BISTATIC 0°
OPERATOR SG QC
360 =36A
90° Roll 30° Pitch
330°
300
270°
240°
210°
180
150
120°
90°
60
30
0°
30°
60°
90°
120°
150°
180°

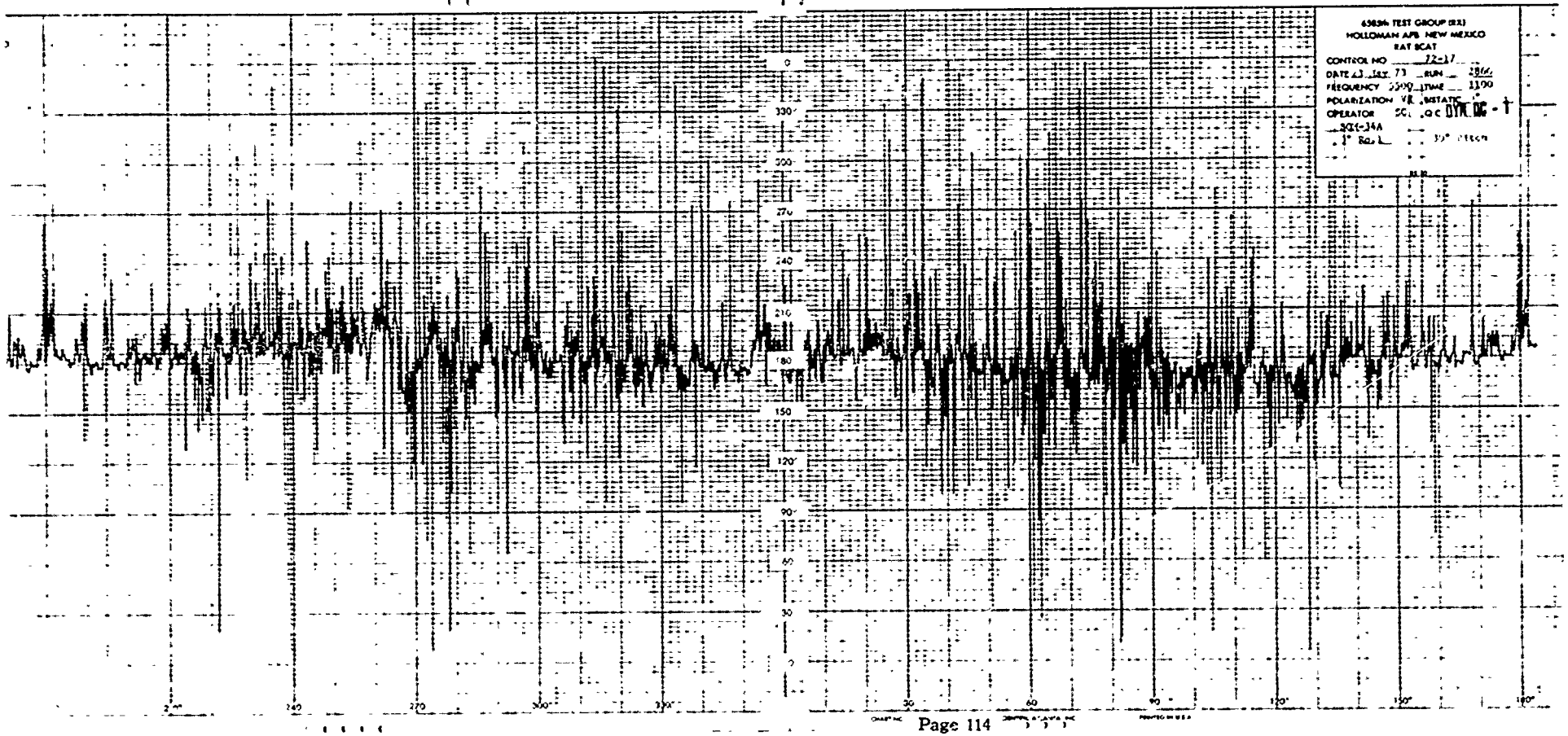

6585th TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO. 72-17
DATE 23 May 73 RUN 288A
FREQUENCY 3500 TIME 1210
POLARIZATION 101 BISTATIC 0°
OPERATOR SC
30M-34A
0° Roll 30° Pitch
40 dBsm
30 dBsm
20 dBsm
10 dBsm
0 dBsm
-10 dBsm
-20 dBsm
-30 dBsm
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

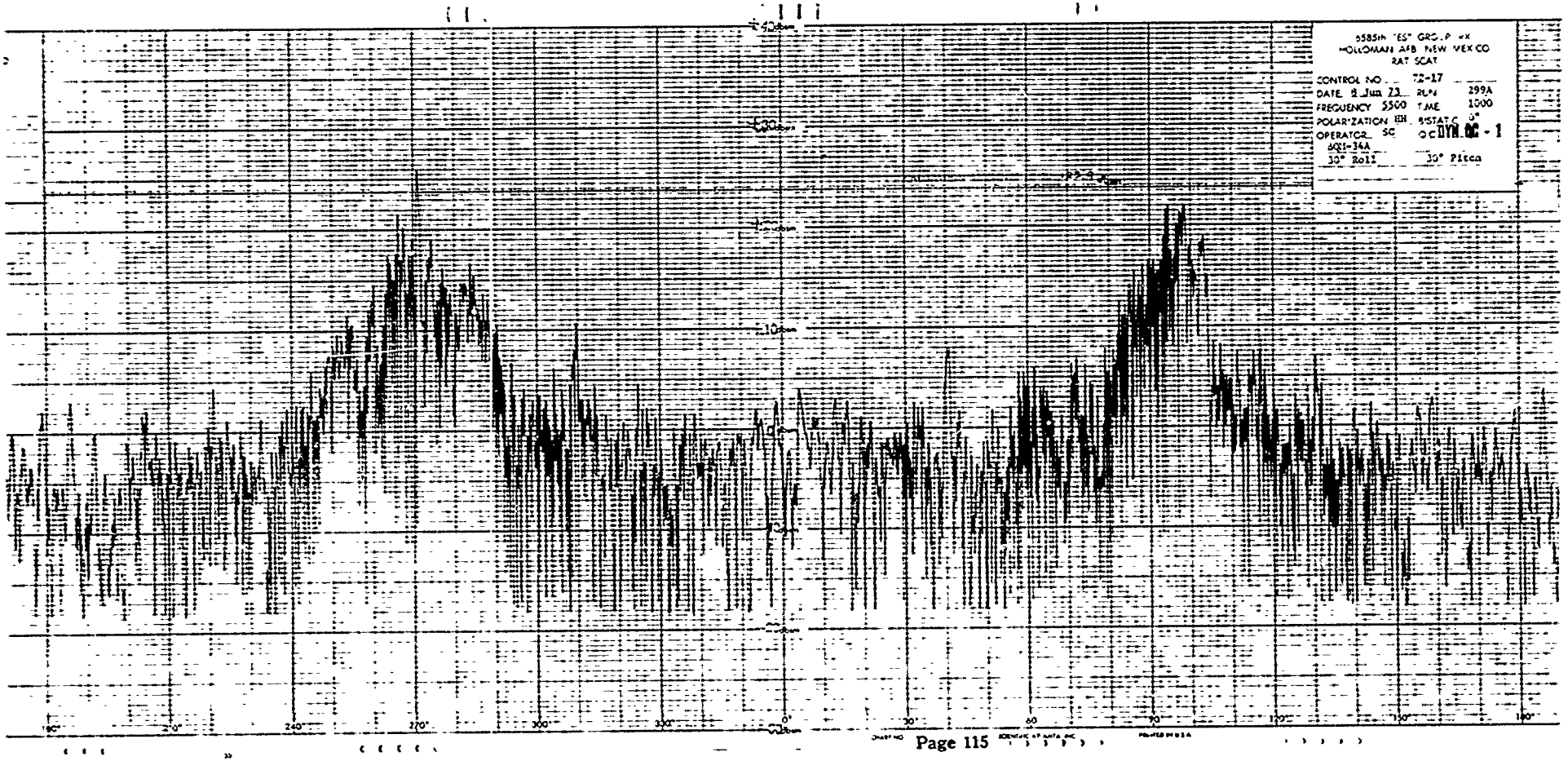

6585th TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 23 July 73 RUN 2850
FREQUENCY 5500 TIME 1215
POLARIZATION HH BISTATIC 0°
OPERATOR SC Q.C.
POM-D4A
0° Roll 130° Pitch
0°
30°
60°
90°
120°
150°
180°
210°
240°
270°
300°
330°

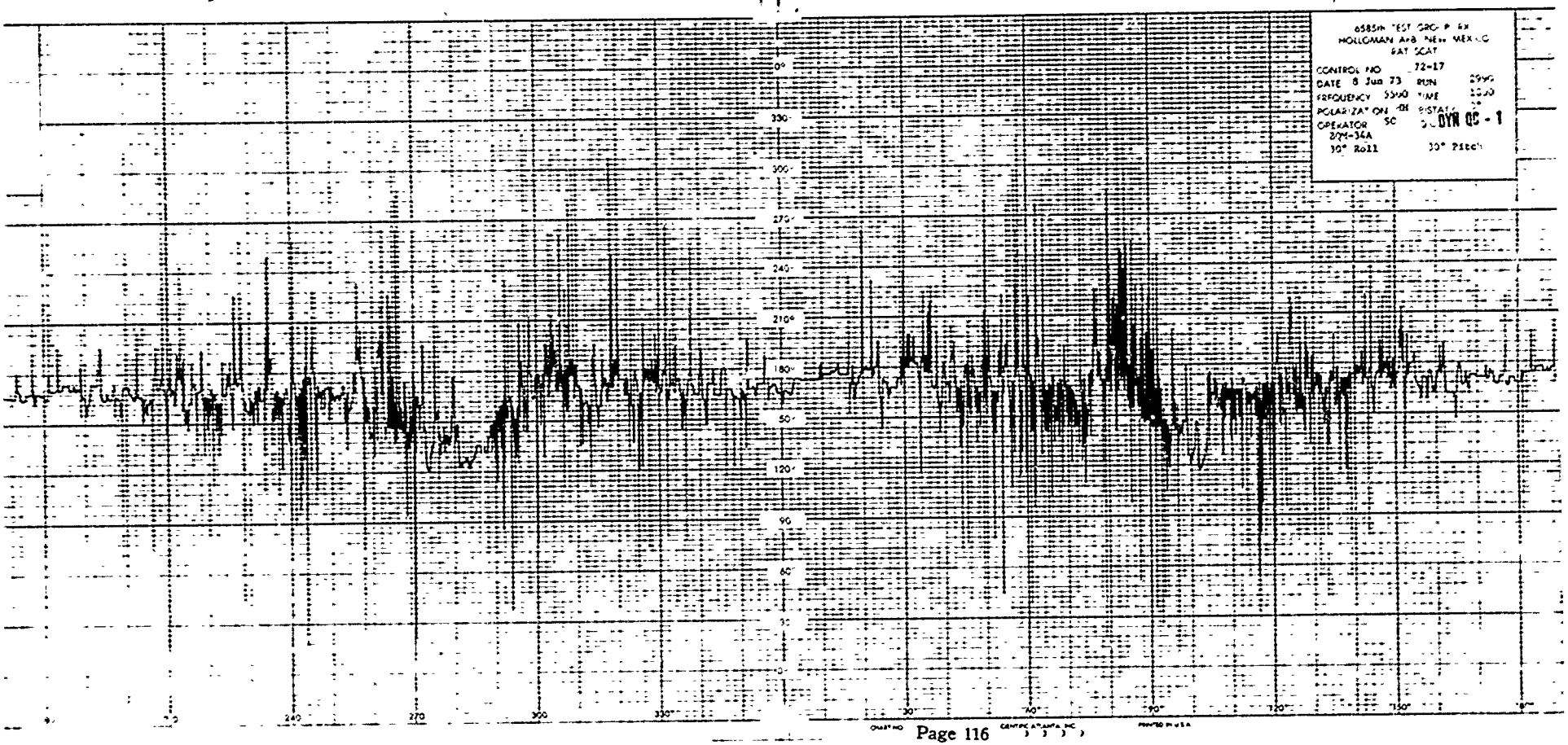

40 dbsm
30 dbsm
20 dbsm
10 dbsm
0 dbsm
-10 dbsm
-20 dbsm
-30 dbsm
90°
210°
240°
270°
300°
330°
30°
60°
90°
120°
150°
180°
HOLLOMAN AFB NEW MEXICO
CONTROL NO 72-17
DATE 21 May 73 RUN 281A
FREQUENCY 5500 TAPE 3800
POLARIZATION VV
OPERATOR SC
BQM-34A
0° Roll 30° Pitch
SYN QC - 1

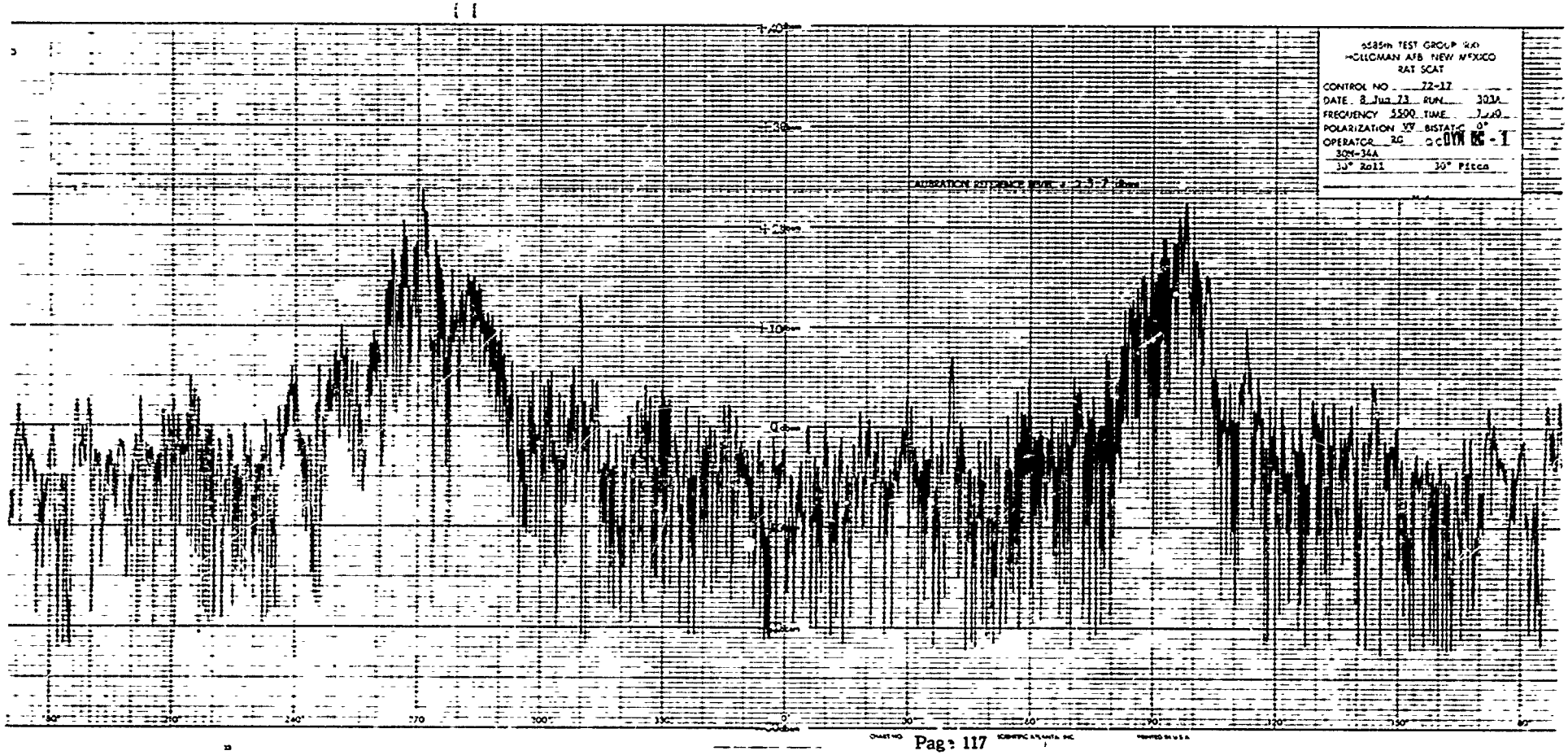

6585th TEST GROUP RXI
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-37
DATE 21 May 73 RUN 2310
FREQUENCY 5500 TIME 3800
POLARIZATION VV BISTAT C 5°
OPERATOR SQN-34A QC DYN QC - 1
5° Azi 35° Elev
330°
300
270
240
210
180
150
120
90
60
30
0
240
270
300
330
30°
60°
90°
120°
150°
180°

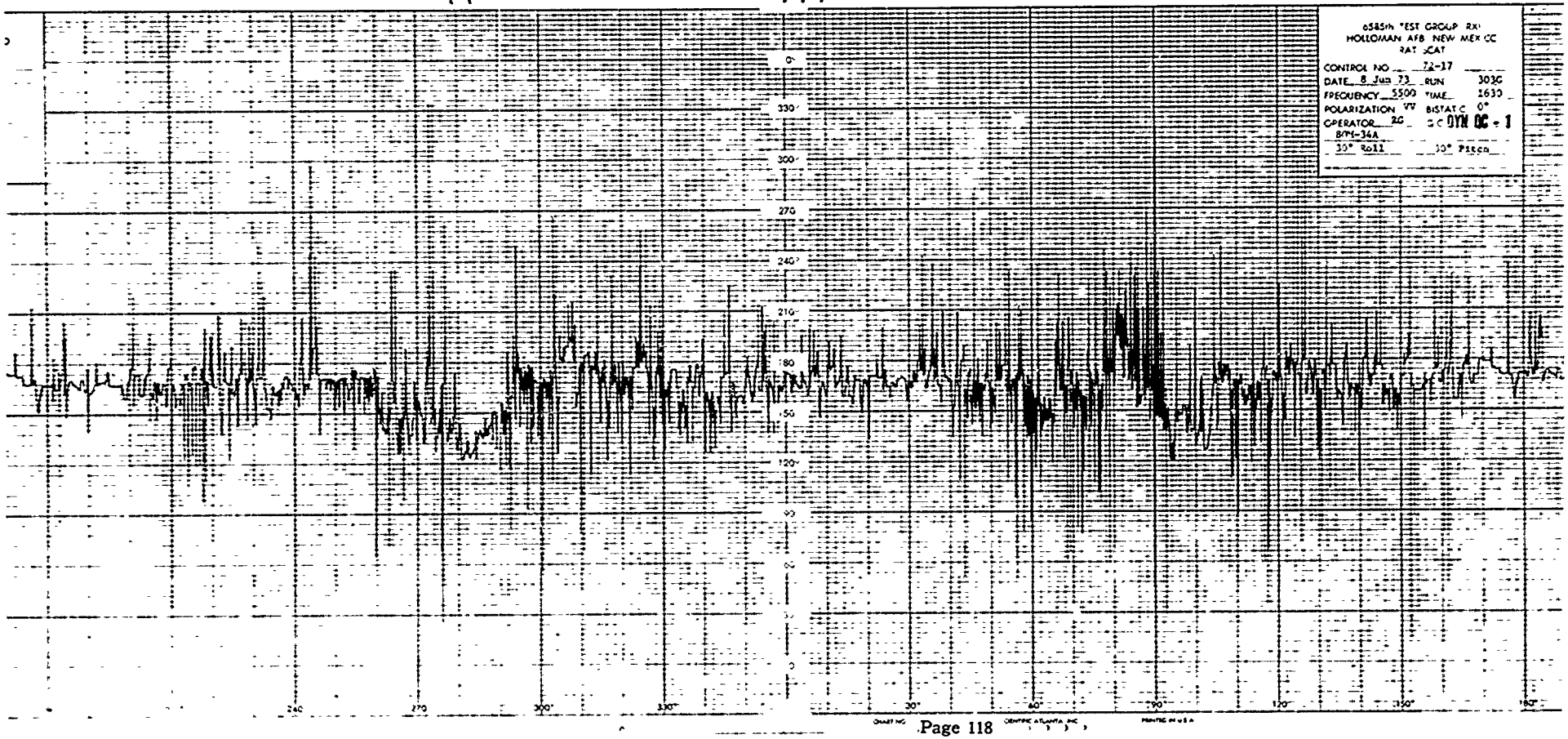

CONTROL NO. 72-17
DATE 23 May 73
RUN 236A
FREQUENCY 5530
TIME 2100
POLARIZATION VH
BISTATIC 3°
OPERATOR SC
DYN RC - 1
371-34A
3° Roll
30° Pitch
CALIBRATION REFERENCE
40
30
20
10
0
-10
-20
-30
60
90
120
150
180
210
240
270
300
330
0

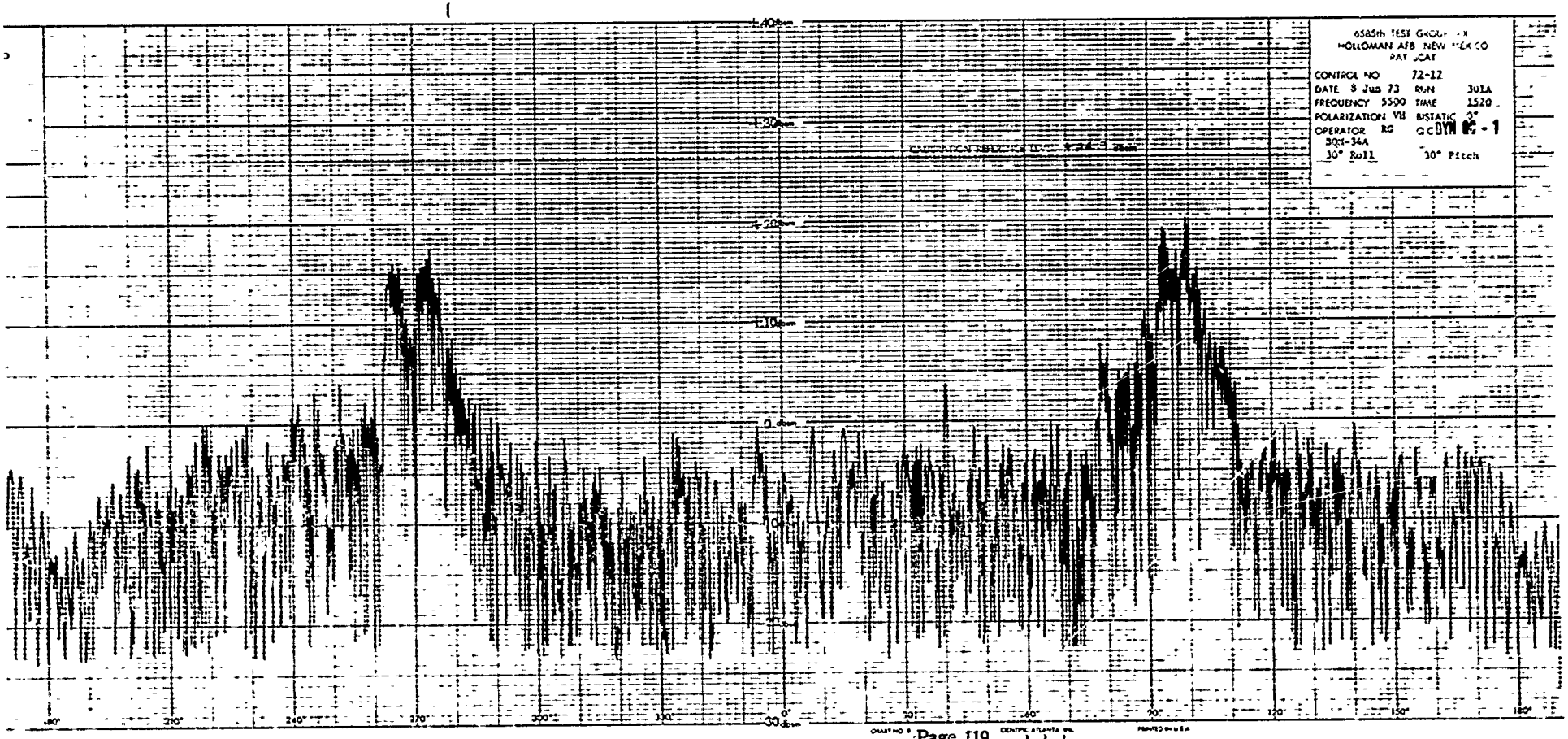

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 23 JAN 73 RUN 2866
FREQUENCY 5500 TIME 1100
POLARIZATION VR STATIC
OPERATOR SGT QC DYK DC - T
30X(-34A
1° Scale
0
330
300
270
240
210
180
150
120
90
60
30
0
240
270
300
330
30
60
90
120
150
180

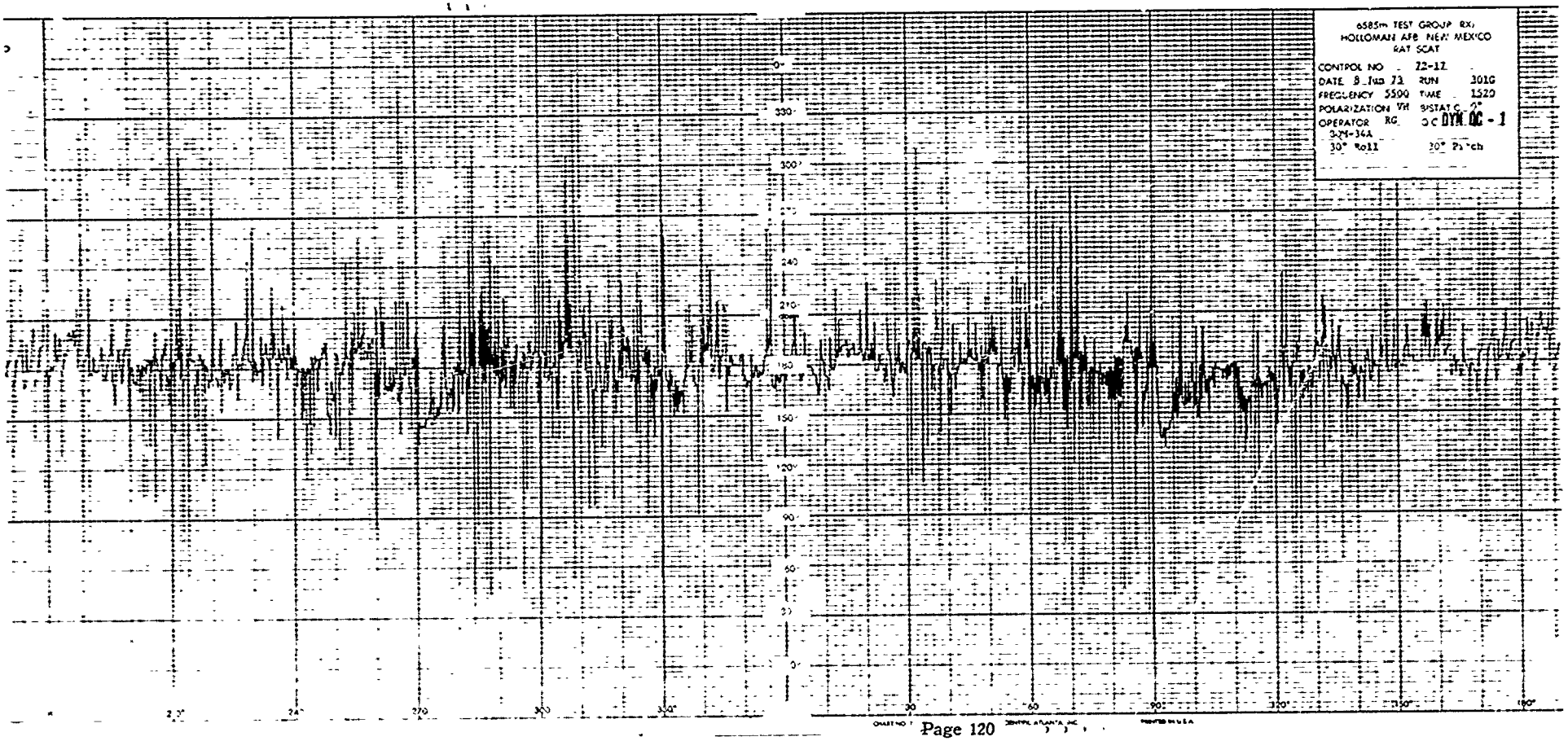

6585th "ES" GROUP (X
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 8 Jun 73 RUN 299A
FREQUENCY 5500 TIME 1000
POLARIZATION HH AZIMUTH 0°
OPERATOR SC
6021-34A
30° Roll 30° Pitch
-40dbsm
-30dbsm
-20dbsm
-10dbsm
0dbsm
90°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

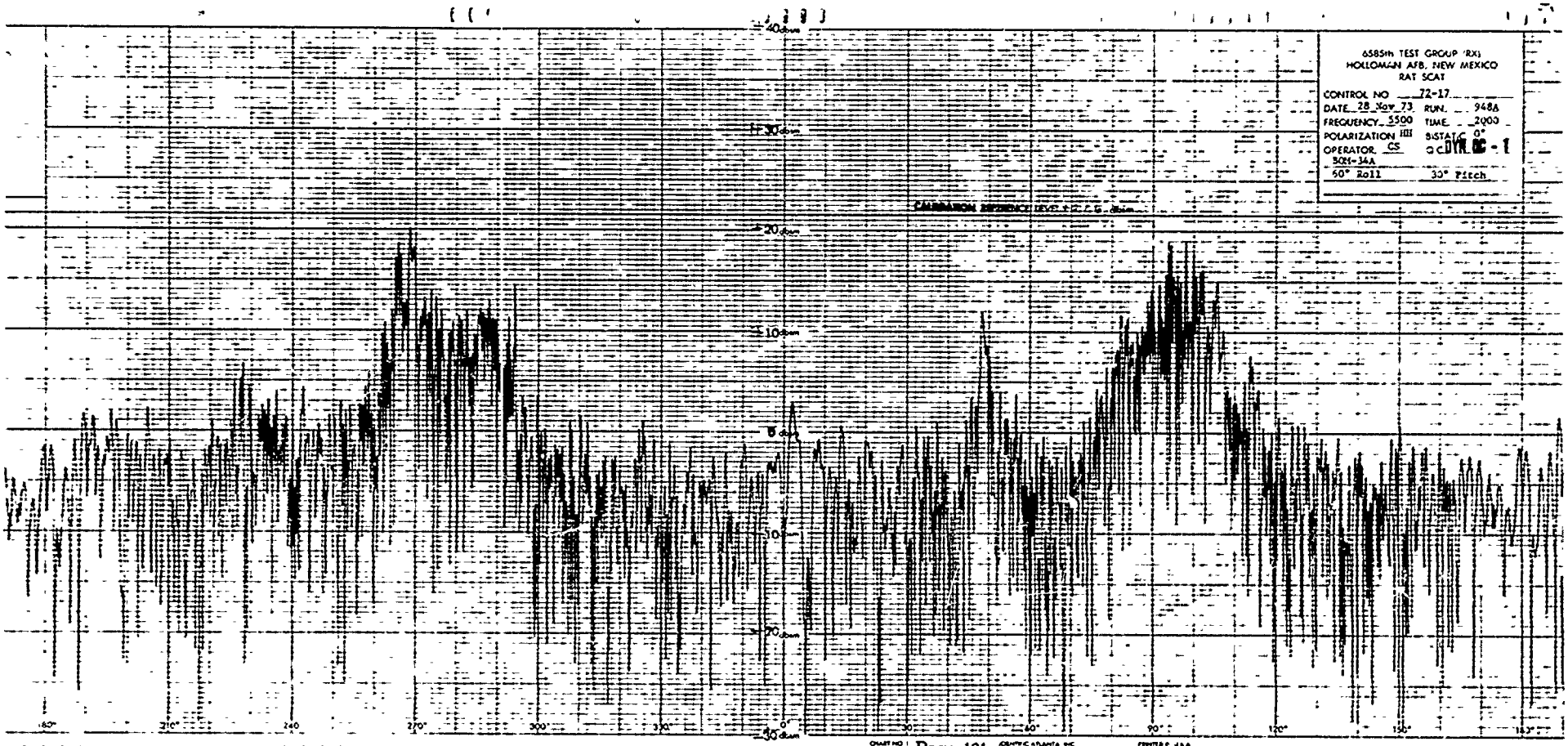

6585th TEST GROUP (T) AFSC
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 8 Jun 73 RUN 0999
FREQUENCY 5500 TIME 1000
POLARIZATION HH POLARIZATION
OPERATOR SC
2/M-34A
30° Roll 30° Pitch
DYN QC - 1
0°
330°
300°
270°
240°
210°
180°
150°
120°
90
60°
30
0°
240
270
300
330°
30°
60°
90°
120°
150°

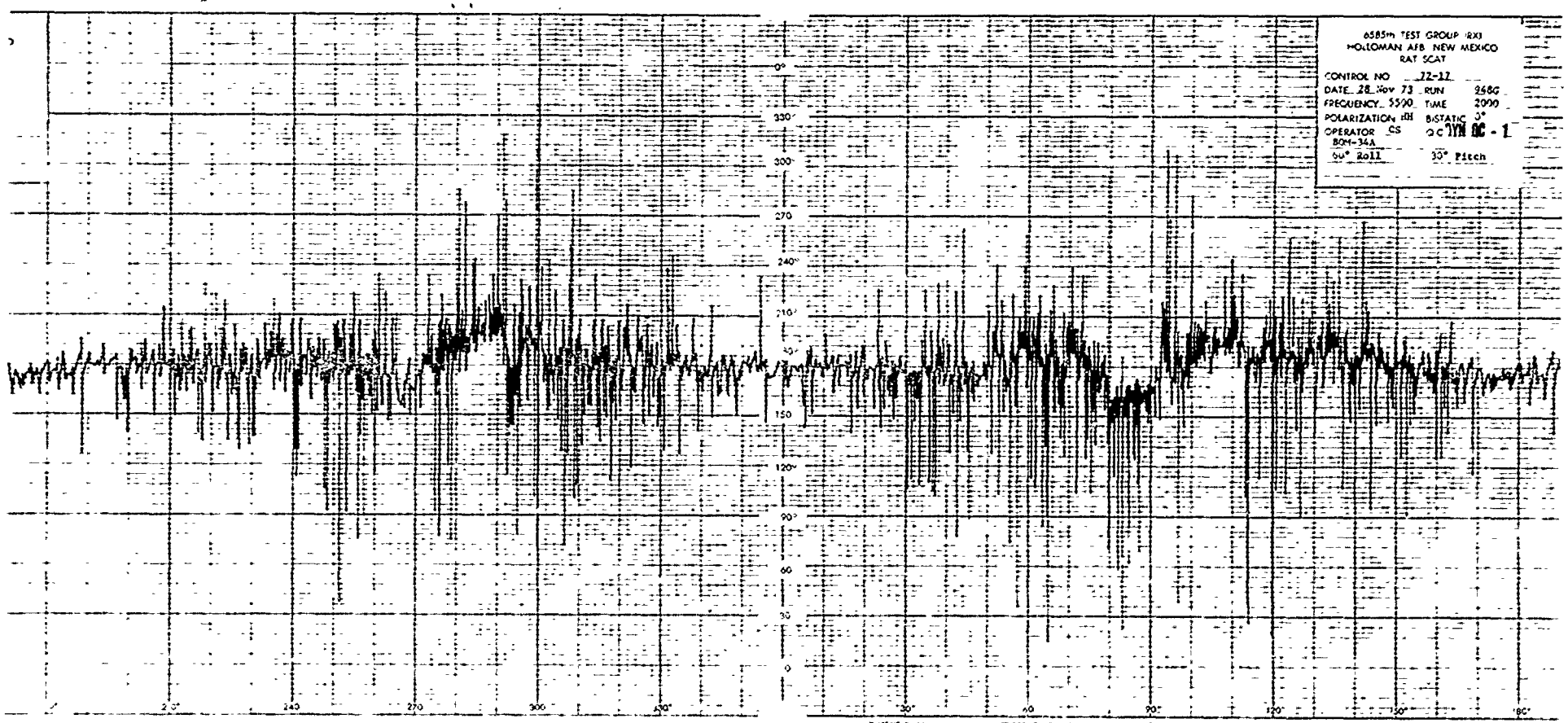

6585th TEST GROUP (RD)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 22-17
DATE 8 Jun 73 RUN 303A
FREQUENCY 5500 TIME 7:20
POLARIZATION VV BISTATIC 0°
OPERATOR RG
30M-34A
30° Azil 30° Pitch
+40dbsm
+30dbsm
+20dbsm
+10dbsm
0dbsm
-10dbsm
90°
210°
240°
270
300°
330°
0°
30°
60°
90°
120°
150°
180°

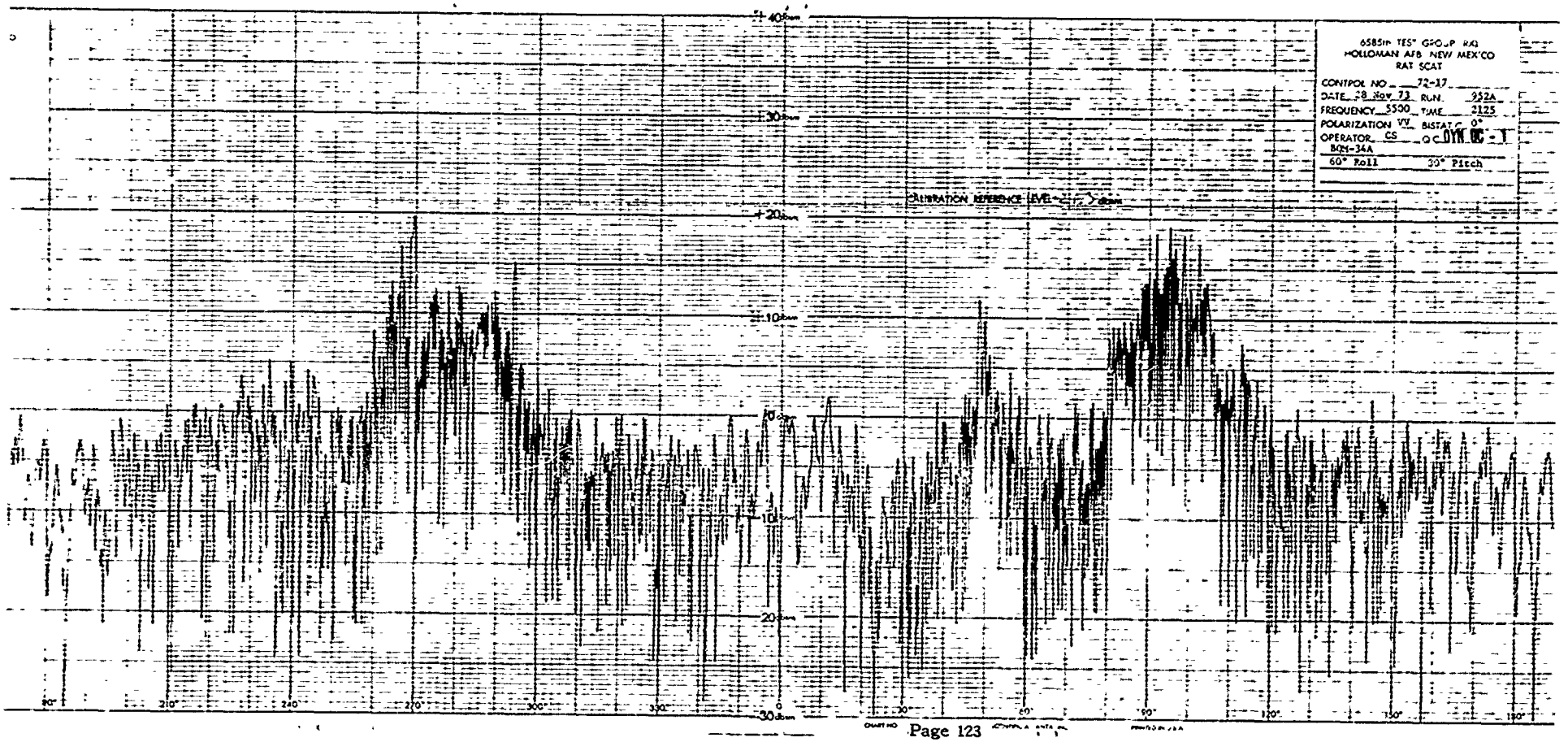

6585th TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 8 Jun 73 RUN 3036
FREQUENCY 5500 TIME 1630
POLARIZATION VV BISTAT C 0°
OPERATOR RG SC OYN OC - 1
B7M-36A
35° Roll 30° Pitch
0°
330°
300°
270°
240°
210°
180°
150°
120°
90°
60°
30°
240°
270°
300°
330°
30°
60°
90°
120°
150°
180°

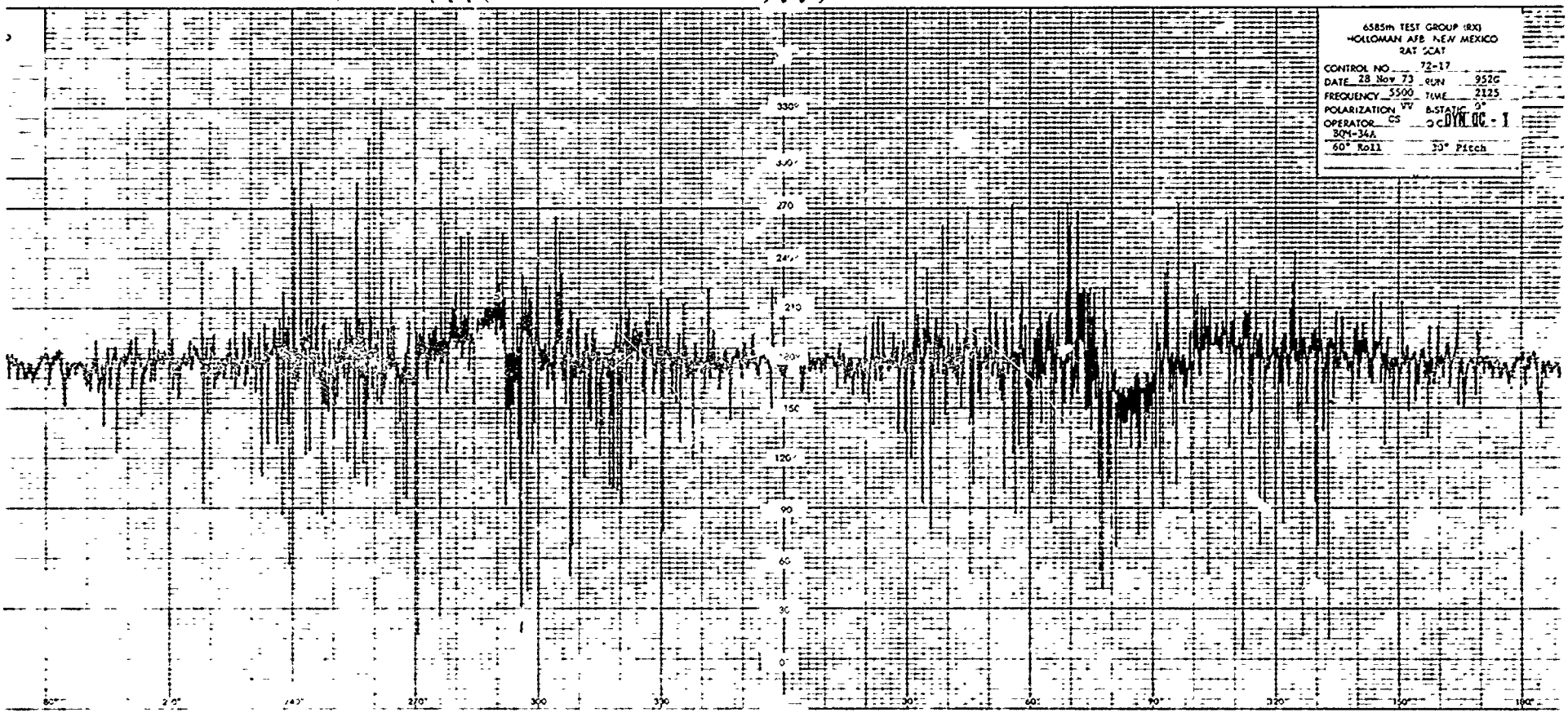

6585th TEST GROUP
HOLLOMAN AFB NEW MEXICO
PAT JCAT
CONTROL NO 72-12
DATE 8 Jun 73 RUN 301A
FREQUENCY 5500 TIME 1520
POLARIZATION VH BISTATIC 0°
OPERATOR RG
30°-34A
30° Roll
30° Pitch
+40dbsm
+30dbsm
+20dbsm
+10dbsm
0 dbsm
-10
-30dbsm
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

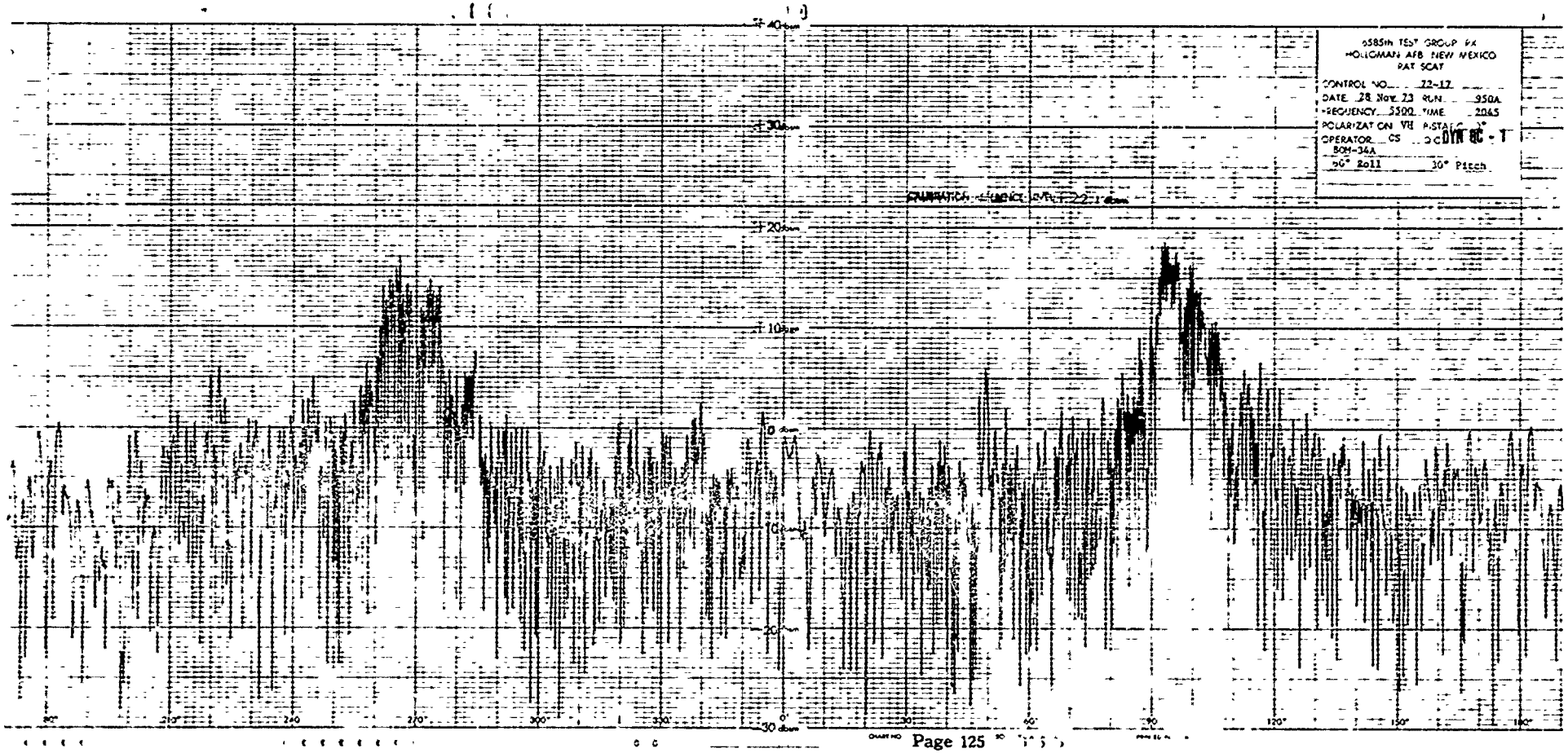

6585m TEST GROUP RX1
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-12
DATE 8 Jun 73 RUN 301G
FREQUENCY 5590 TIME 1529
POLARIZATION VH SYSTAT C 2°
OPERATOR RG OC DYN OC - 1
3-M-34A
30° Roll 30° Pitch
0°
330°
300°
270°
240°
210°
180°
150°
120°
90°
60°
30°
0°
30
60
90°
120°
150°
180°

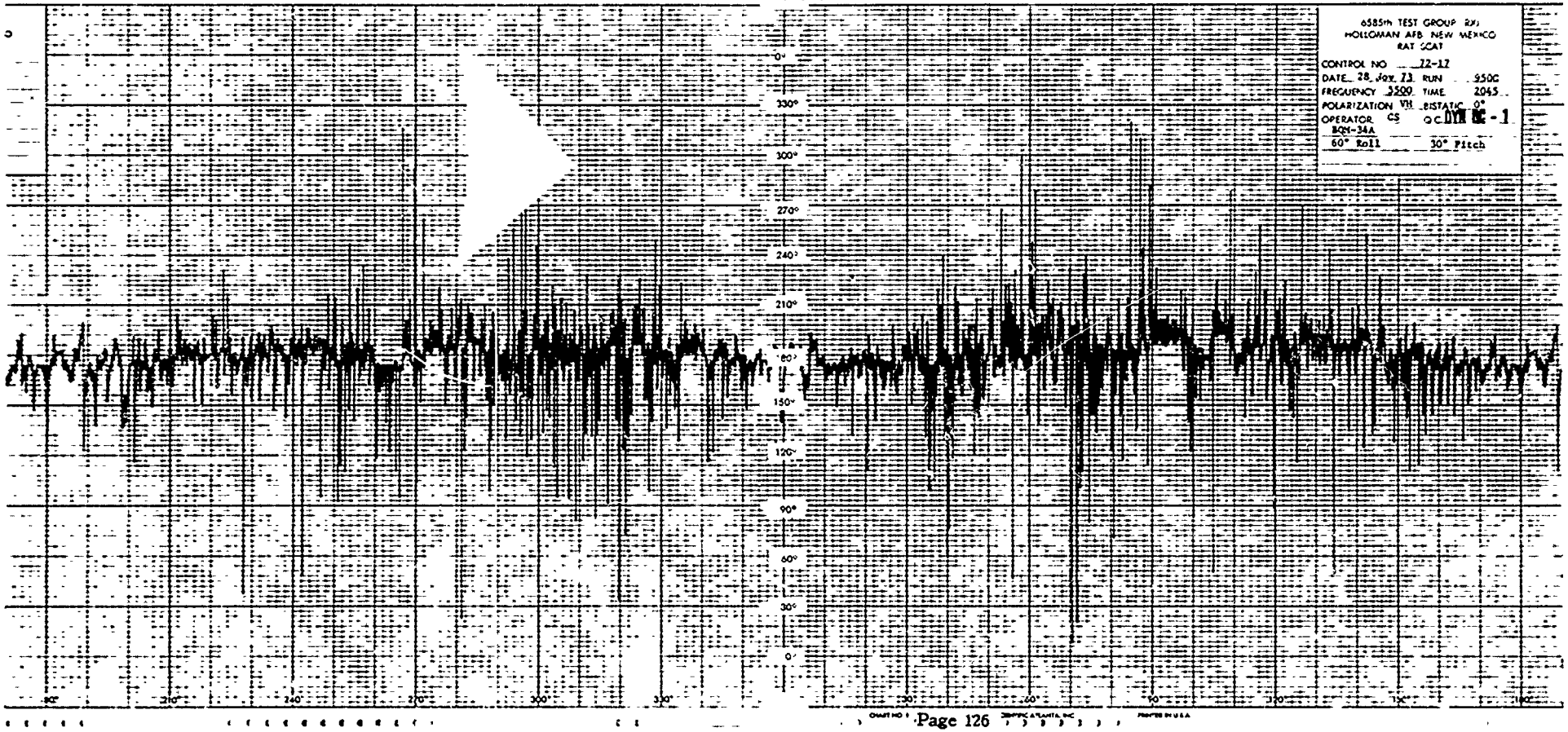

6585th TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 28 Nov 73 RUN 948A
FREQUENCY 5500 TIME 2000
POLARIZATION HH BISTAT C 0°
OPERATOR CS
50ft-34A
60° Roll 30° Pitch
-40dbsm
-30dbsm
-20dbsm
-10dbsm
0 dbsm
10dbsm
20dbsm
30dbsm
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

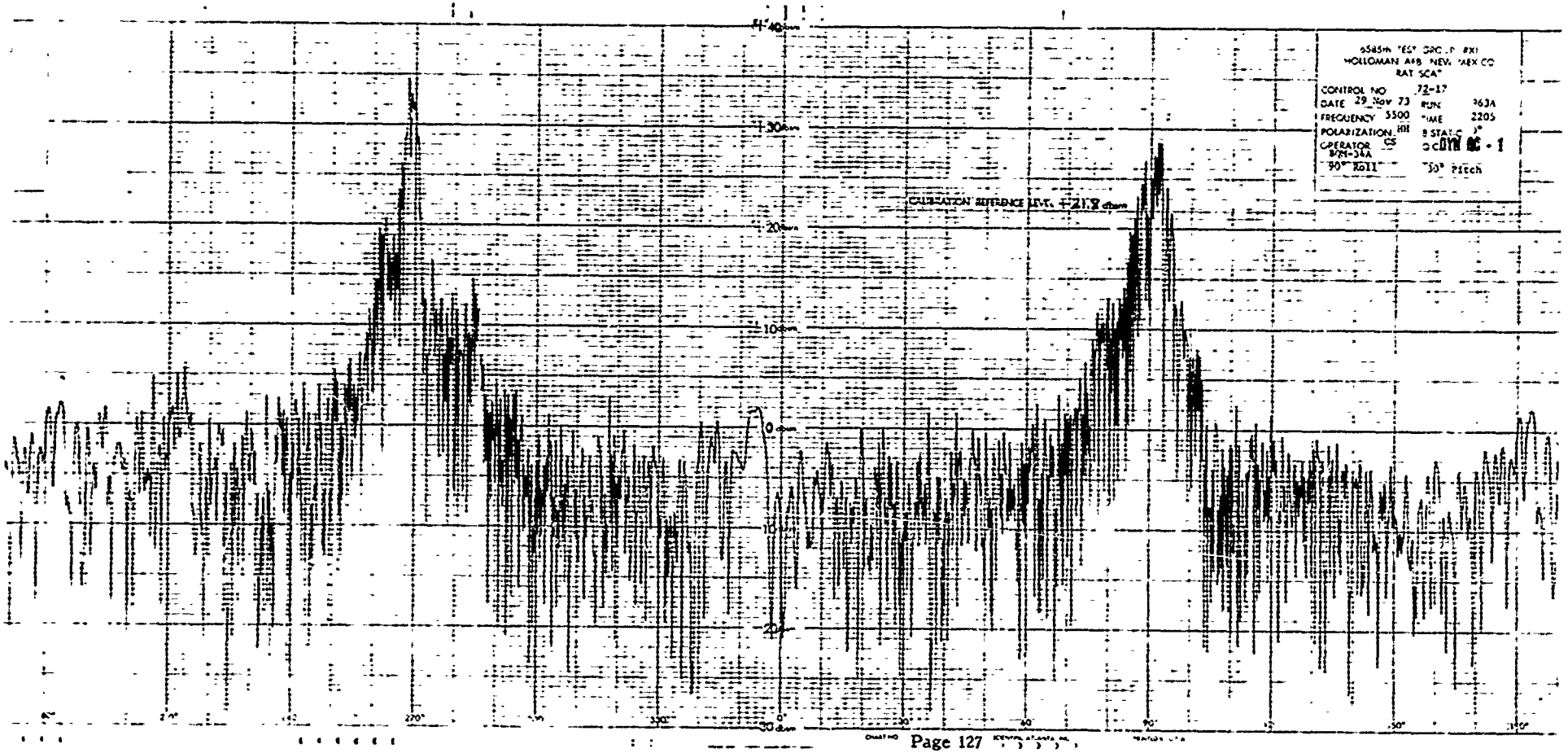

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-12
DATE 28 Nov 73 RUN 2686
FREQUENCY 5590 TIME 2090
POLARIZATION HH BISTATIC 0°
OPERATOR CS
80M-34A
0° Roll
30° Pitch
0°
330°
300°
270°
240°
210°
180°
150°
120°
90°
60
30
0
240
270
300
330°
30°
60
90°
120°
150°
180°

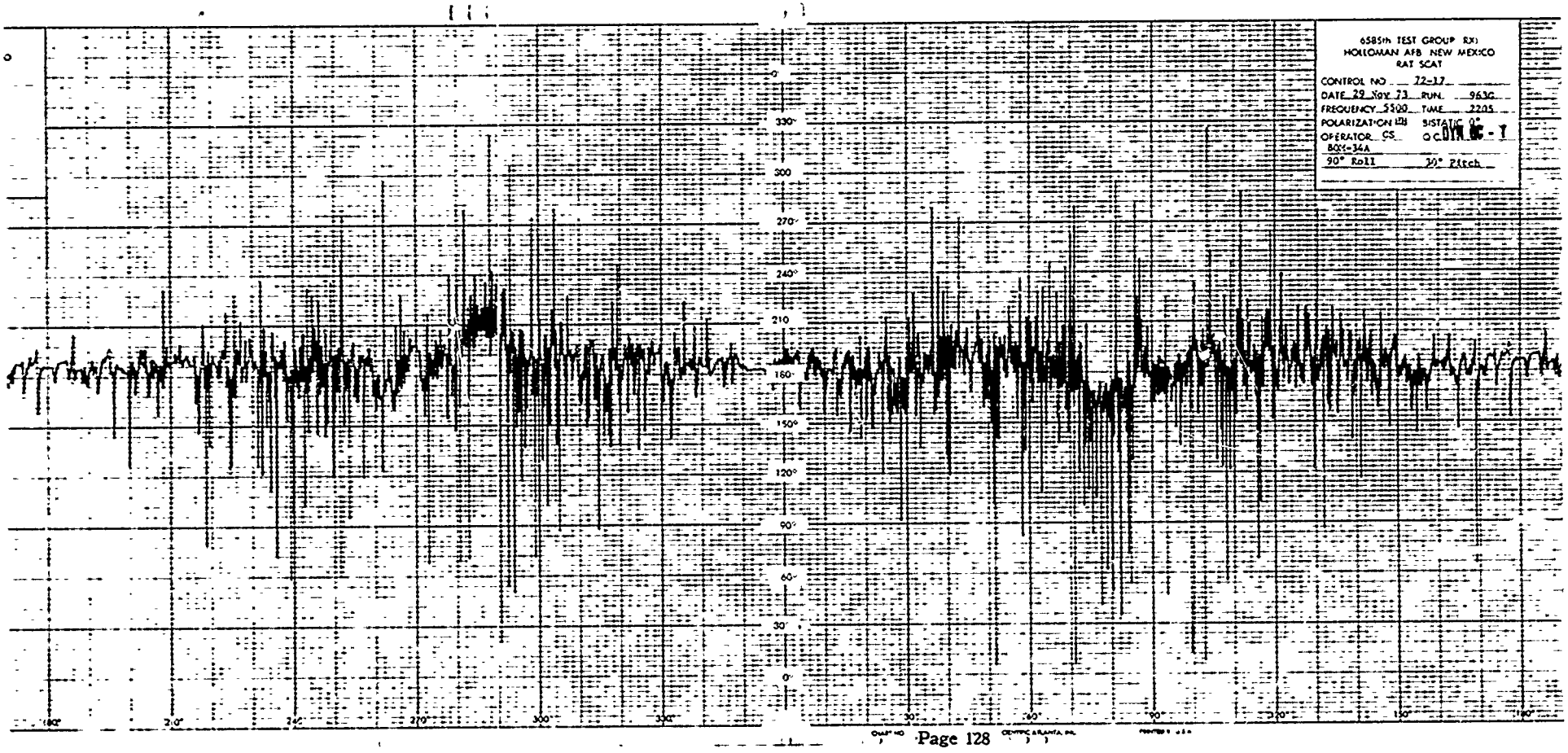

6585th TES" GROUP R/Q
HOLLOMAN AFB NEW MEX'CO
RAT SCAT
CONTROL NO 72-17
DATE 28 Nov 72 RUN 352A
FREQUENCY 5500 TIME 2125
POLARIZATION VV BISTAT 0°
OPERATOR CS QC DYN RC - 1
BQM-34A
60° Roll 30° Pitch
CALIBRATION REFERENCE LEVEL
+40dbsm
+30dbsm
+20dbsm
+10dbsm
0
-10
-20dbsm
-30dbsm
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

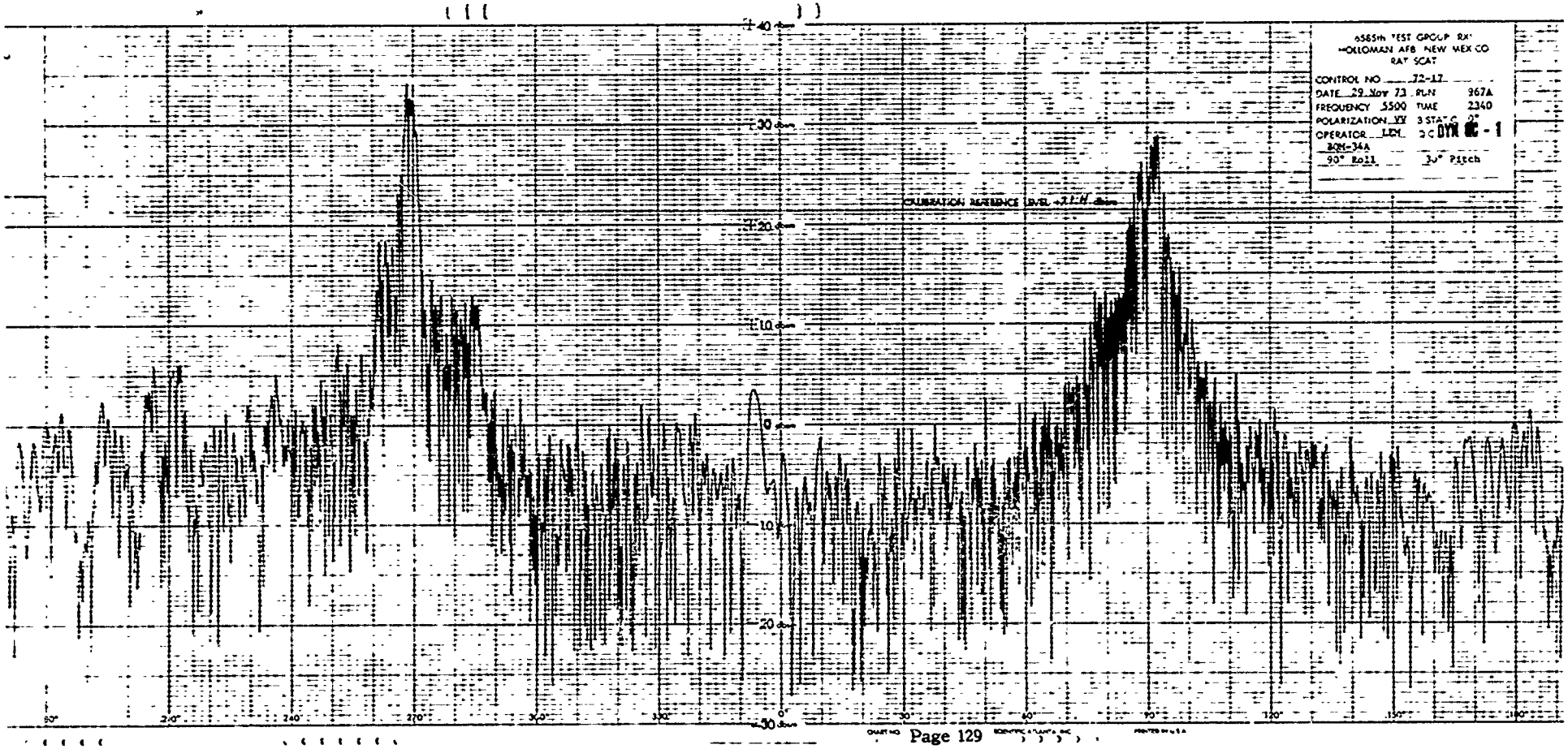

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO. 72-17
DATE 28 Nov 73
RUN 952G
FREQUENCY 5500
TIME 2125
POLARIZATION VV
BI-STATIC 0°
OPERATOR CS
DYN OC - I
30M-34A
60° Roll
35° Pitch
330°
270°
210°
150°
120°
90
60
30
0°
30°
60°
90°
120°
150°
180°

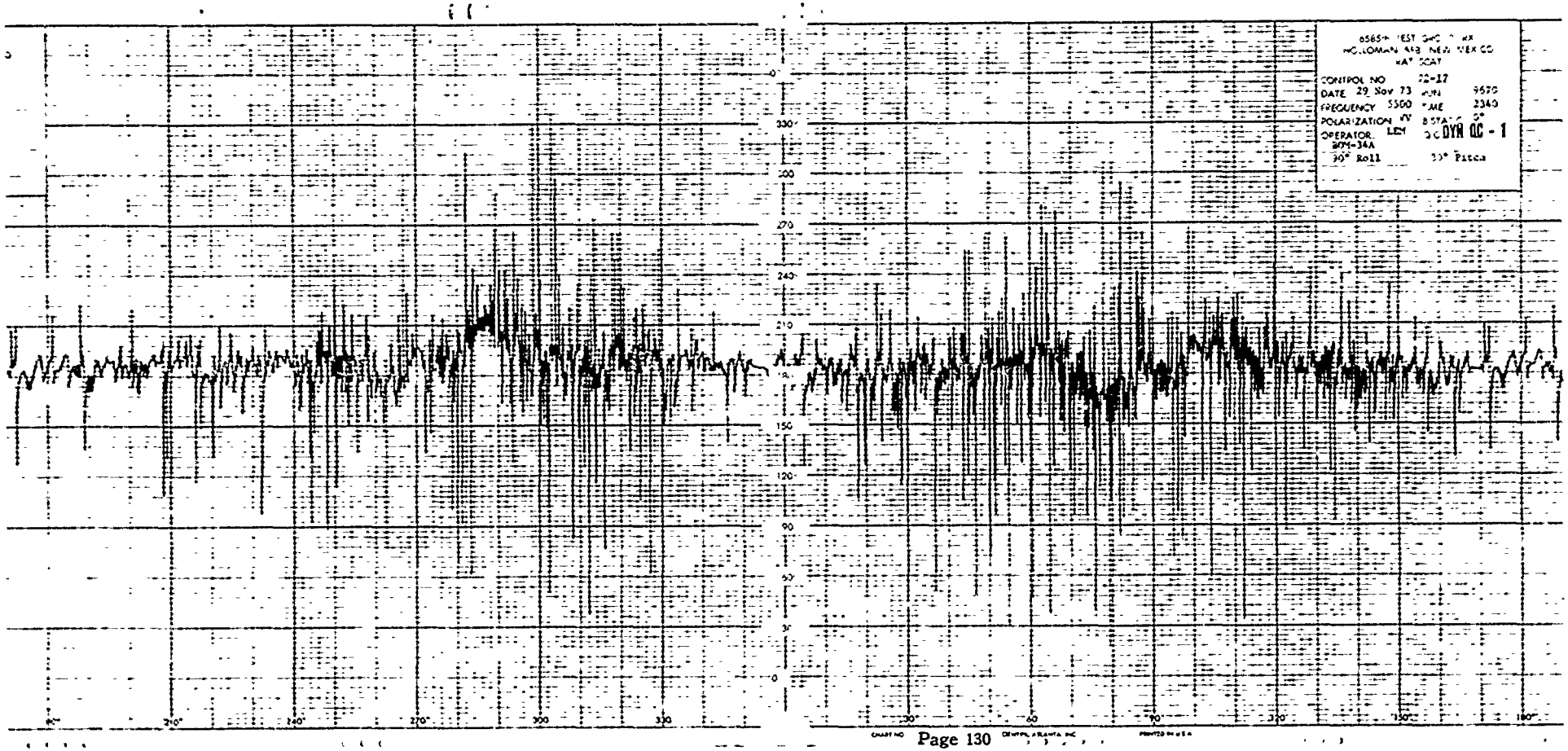

6585th TEST GROUP PX
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO. 22-17
DATE 28 Nov 23 RUN 950A
FREQUENCY 5500 TIME 2045
POLARIZATION VH
OPERATOR CS
50M-34A
90° Roll 30° Pitch
DYN RC - 1
+40 dbsm
+30 dbsm
+20 dbsm
+10 dbsm
0 dbsm
-10 dbsm
-20 dbsm
-30 dbsm
210°
240
270°
300°
330°
0°
30
60°
90
120°
150°
180°

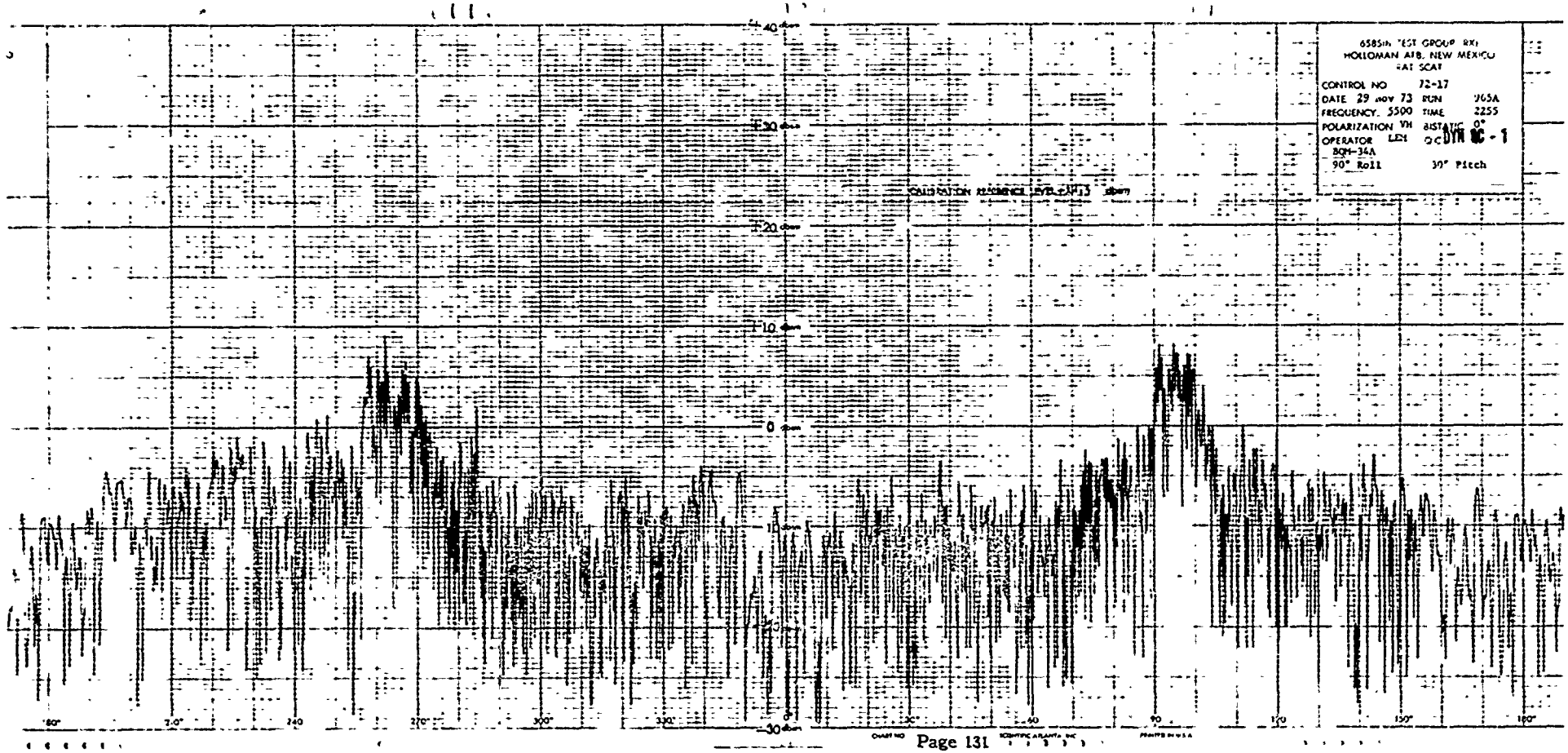

6585th TEST GROUP (RI)
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO 72-12
DATE 28 Nov 72 RUN 9500
FREQUENCY 9500 TIME 2045
POLARIZATION VH BISTATIC 0°
OPERATOR CS QC DYN RC - 1
RCS-34A
60° Roll 30° Pitch
0°
330°
300°
270°
240°
210°
180°
150°
120°
90°
60°
30°
0°

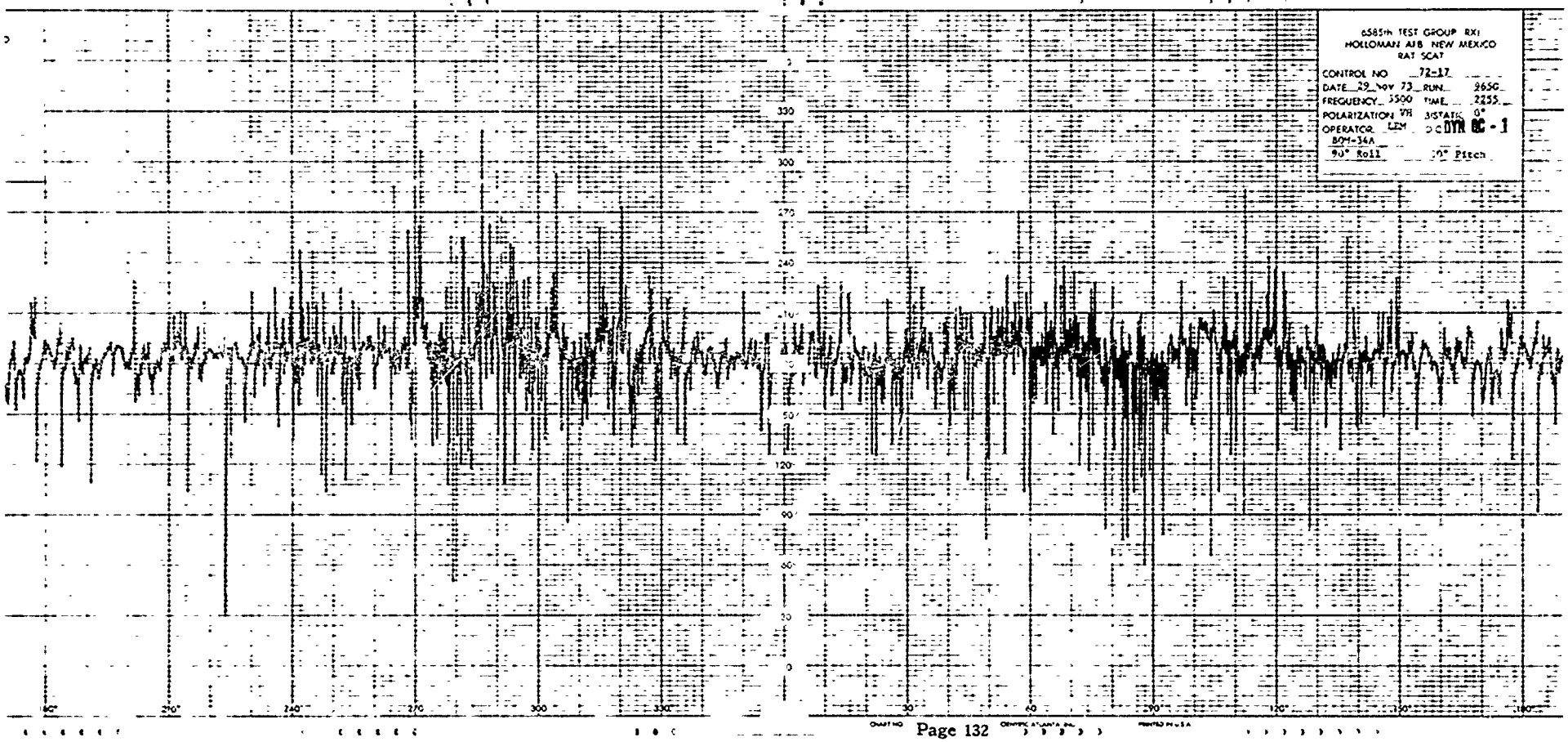

6585m TEST SRC P RXI
HOLLOMAN AFB NEW MEX CO
RAT SCAT
CONTROL NO 72-17
DATE 29 Nov 73
RUN 963A
FREQUENCY 5500
TIME 2205
POLARIZATION HH
OPERATOR CS
RM-34A
90° Roll
30° Pitch
CALIBRATION REFERENCE LEVEL +21.2 dBsm
30dBsm
20dBsm
10dBsm
0dBsm
10
20
30 dBsm

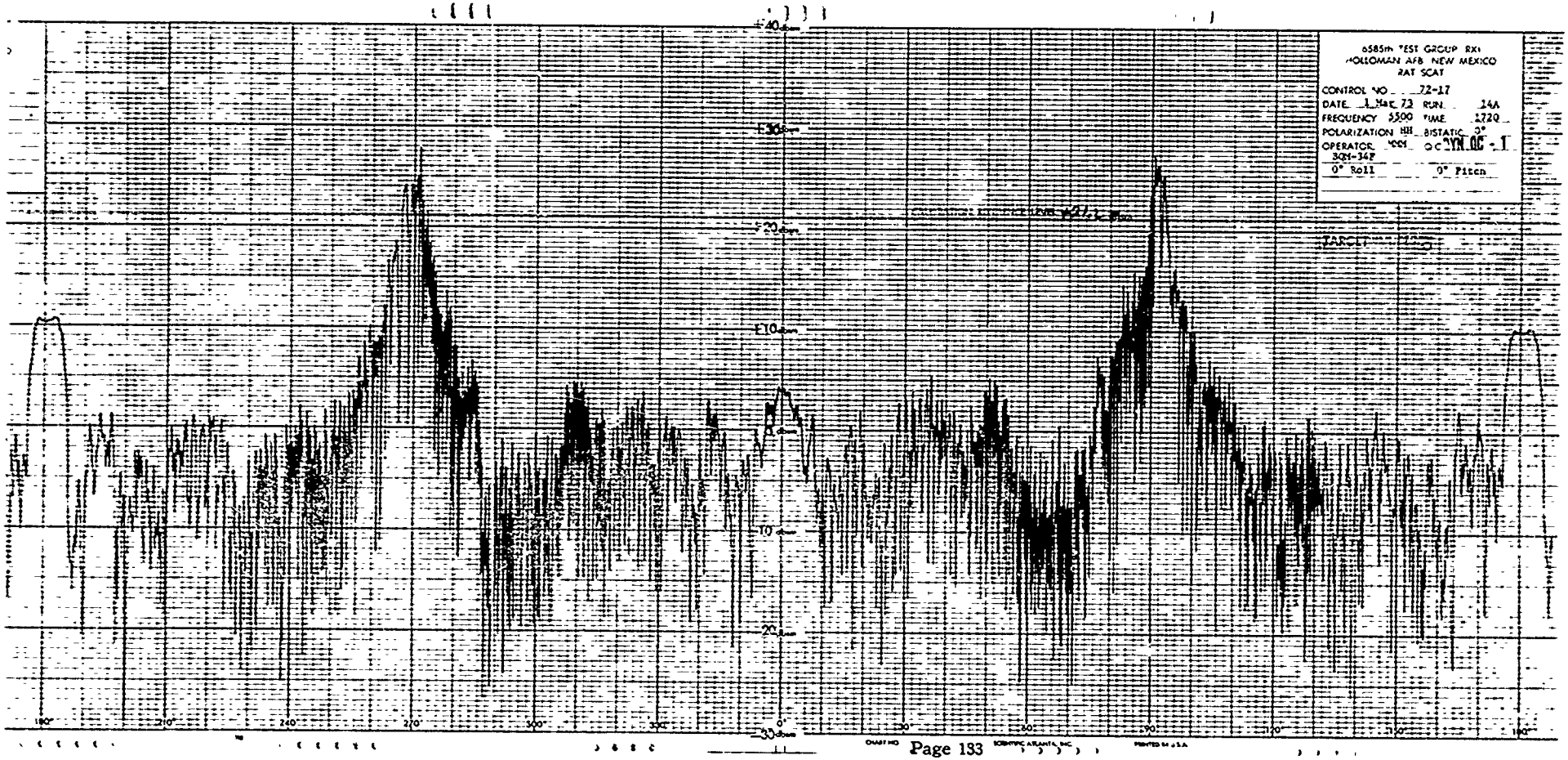

6585th TEST GROUP RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 29 Nov 73 RUN 963G
FREQUENCY 5300 TIME 2205
POLARIZATION LIN STATIC 0°
OPERATOR GS QC DYN RC - 1
BOX 1-34A
90° Roll 30° Pitch
0°
330°
300°
270°
240°
210°
180°
150°
120°
90°
60°
30°
0°

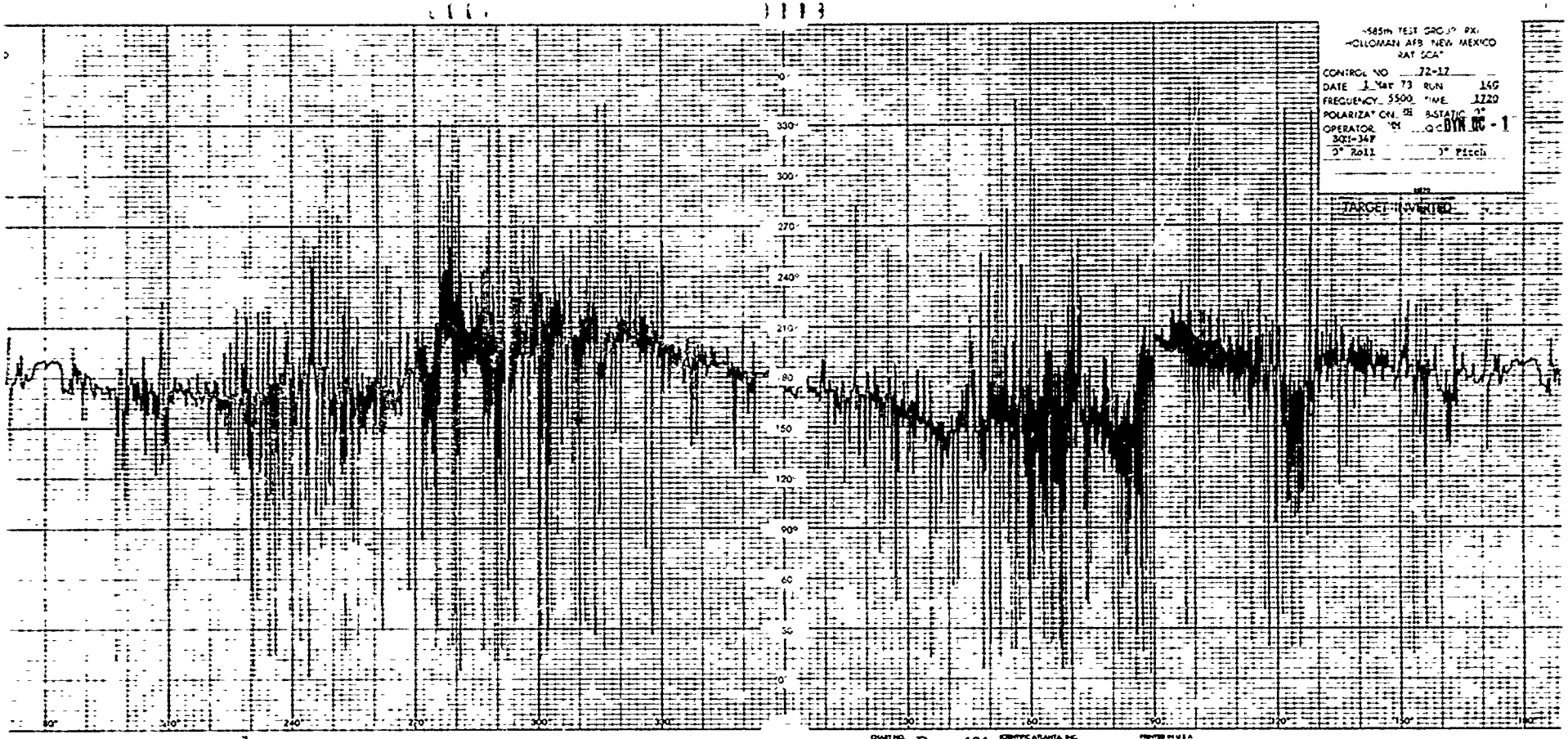

6585th TEST GROUP RX
HOLLOMAN AFB NEW MEX CO
RAT SCAT
CONTROL NO 72-17
DATE 29 Nov 73 PLN 967A
FREQUENCY 5500 TUNE 2340
POLARIZATION VV
OPERATOR LRL
AQM-34A
90° Roll
30° Pitch
DYN RC - 1
CALIBRATION REFERENCE LEVEL +21 dbm
+40 dbm
+30 dbm
+20 dbm
+10 dbm
0 dbm
-10 dbm
-20 dbm
-30 dbm
90°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

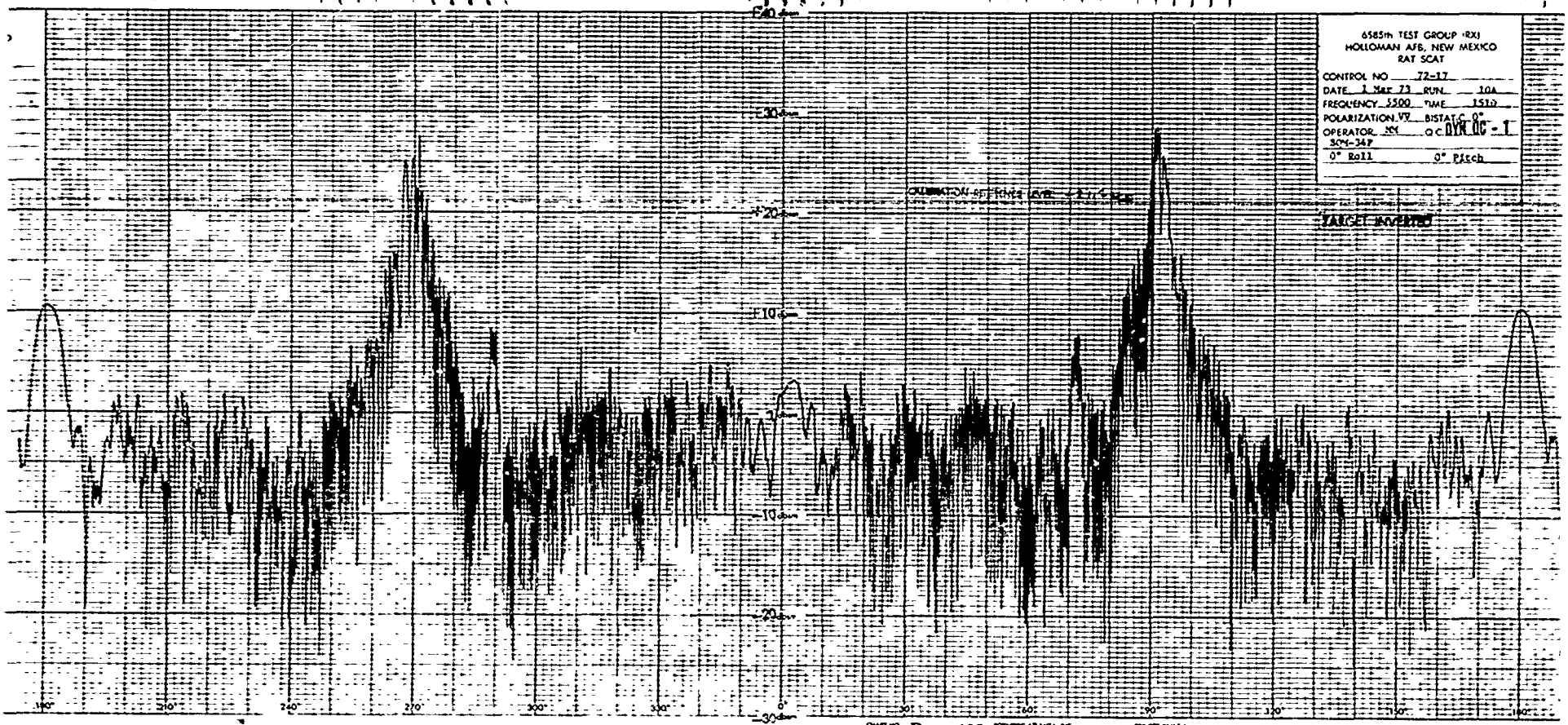

6565th TEST GRP
HOLLOMAN AFB NEW MEX CO
RAT SCAT
CONTROL NO 72-17
DATE 29 Nov 73
FREQUENCY 5500
POLARIZATION VV
OPERATOR LEN
80M-34A
90° Roll
DYN QC - 1
0
330
300
270
240
210
180
150
120
90
60
30
0
210°
240°
270°
300
330
30
60
90
120
150
180°

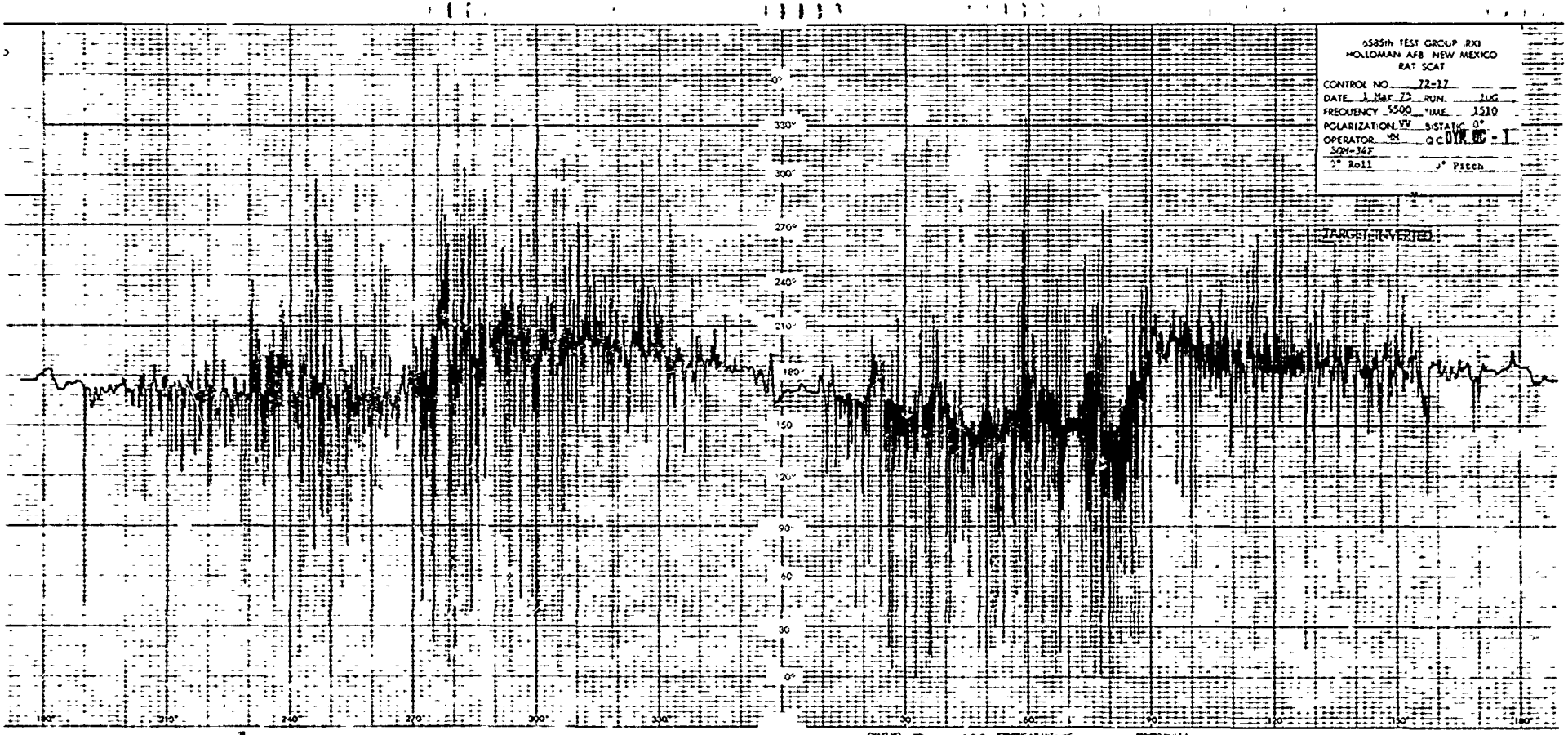

6585th TEST GROUP RKI
HOLLOMAN AFB, NEW MEXICO
RAE SCAT
CONTROL NO 72-17
DATE 29 Nov 73 RUN 965A
FREQUENCY 5500 TIME 2255
POLARIZATION VH BISTATIC 0°
OPERATOR LEI
BQH-34A
90° Roll 39° Pitch
DYN RC - 1
CALIBRATION REFERENCE LEVEL (AP) 3 dbsm
+40 dbsm
+30 dbsm
+20 dbsm
+10 dbsm
0 dbsm
-10 dbsm
-30 dbsm
210°
240
270°
300°
330
0°
30°
60
90
120
150°
180°

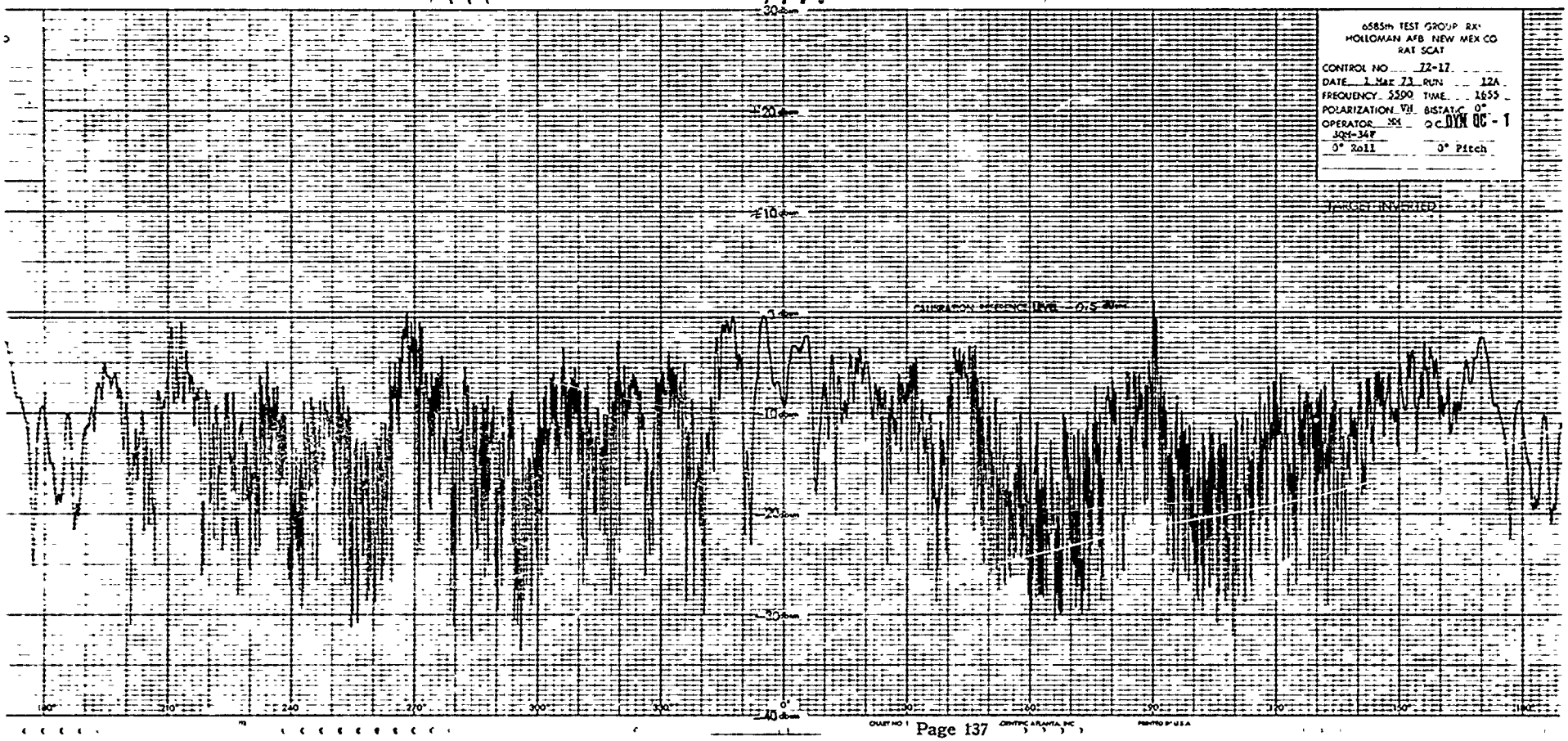

6585th TEST GROUP RXI
HOLLOMAN AIR FORCE BASE NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 29 Nov 73 RUN 0650
FREQUENCY 5500 TIME 2255
POLARIZATION VH BISTATIC 0°
OPERATOR LEM
BOM-34A
90° Roll
0° Pitch
DYN RC - 1
330
300
270
240
210
180
150
120
90
60
30
0
60°
270°
240°
270
300
330
30°
60
90°
120°
150°
180°

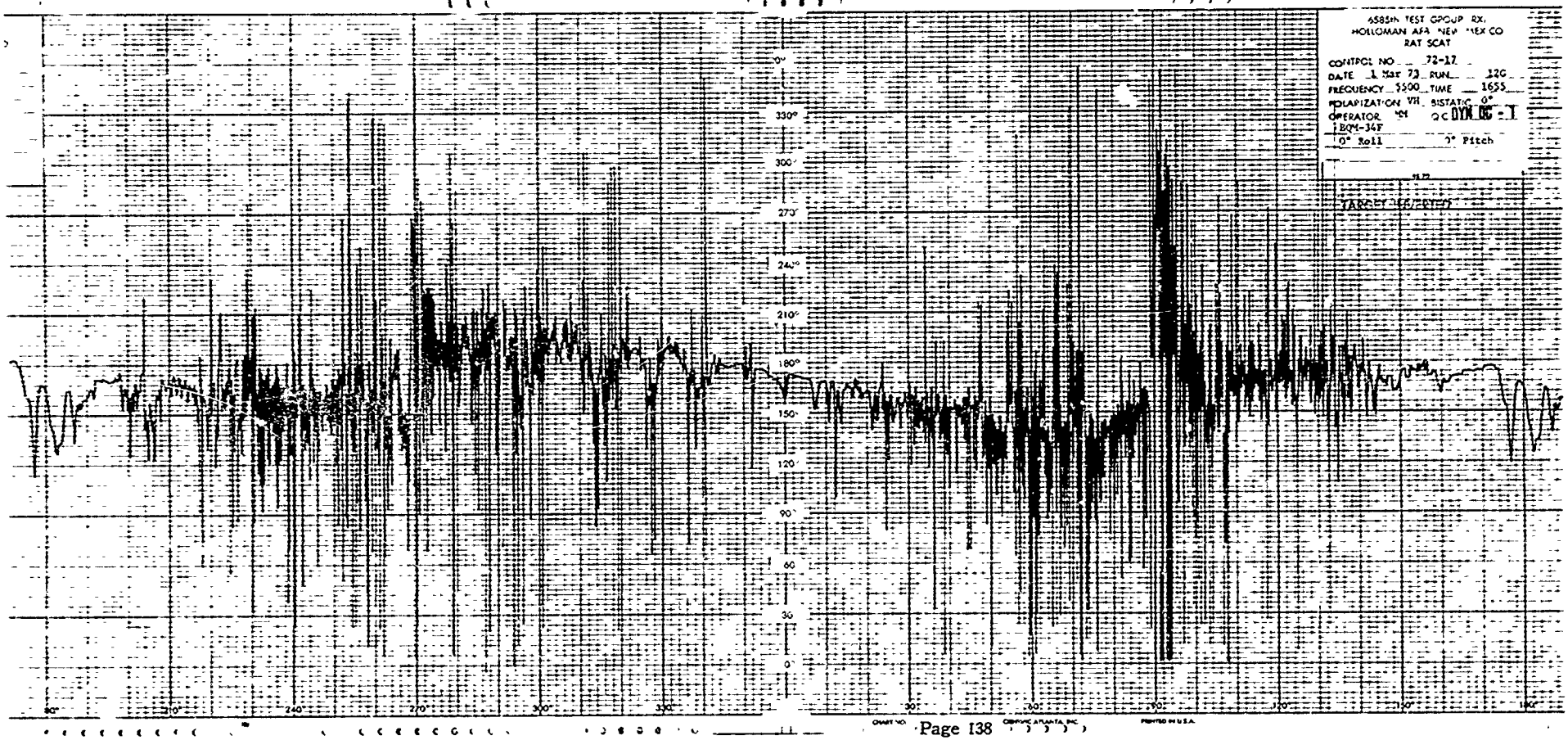

6585th TEST GROUP RX1
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO. 72-17
DATE 1 Mar 73 RUN 14A
FREQUENCY 5500 TIME 2720
POLARIZATION HH BISTATIC 0°
OPERATOR [illegible] QC
30H-34P
0° Roll
0° Pitch
TARGET
40 dBsm
30 dBsm
20 dBsm
10 dBsm
0 dBsm
10 dBsm
20 dBsm
30 dBsm
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

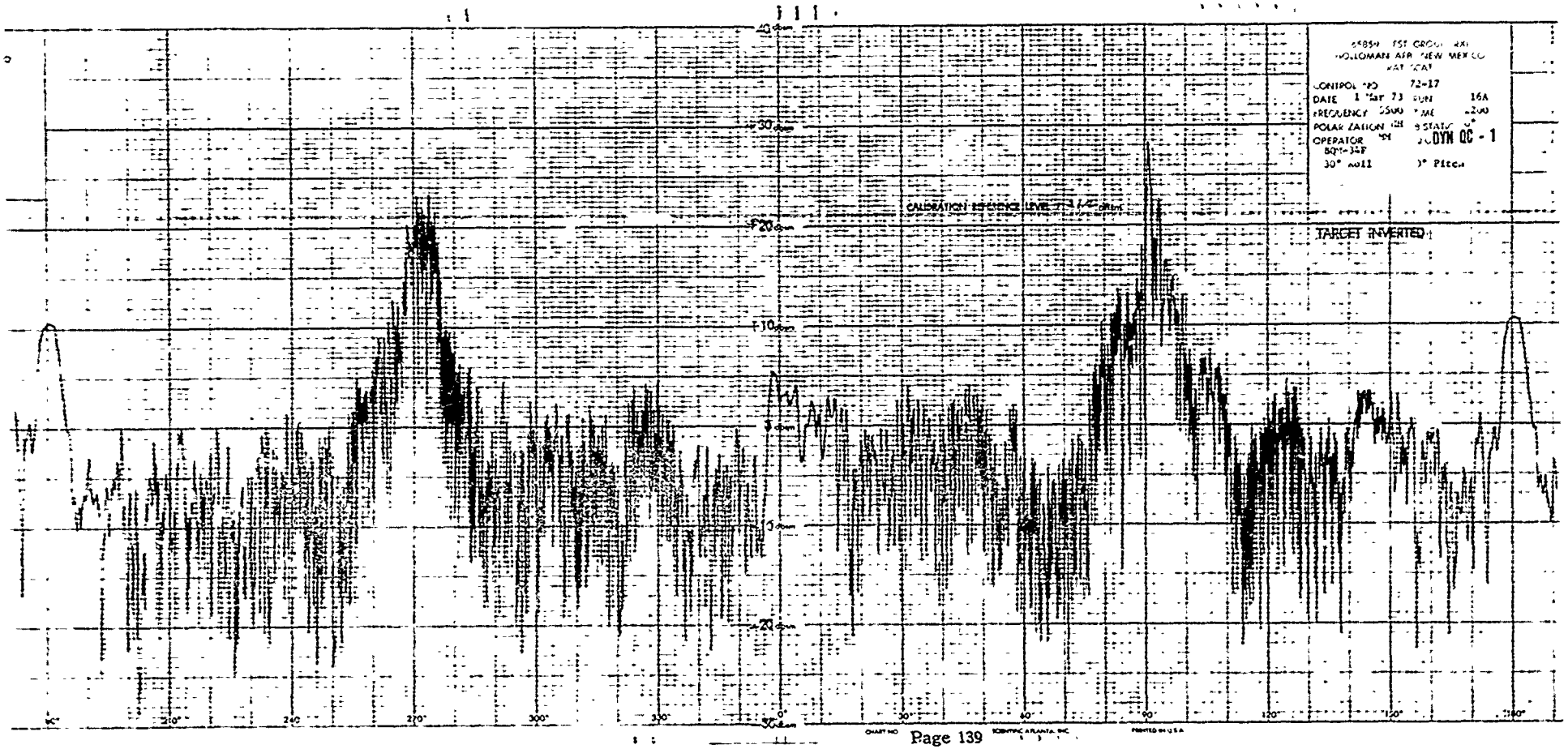

~585m TEST GROUP PX:
HOLLOMAN AFB NEW MEXICO
RAT SCA"
CONTROL NO 72-12
DATE 1 Mar 73 RUN 16G
FREQUENCY 5500 TIME 1220
POLARIZA" ON 5E BISTATIC 1°
OPERATOR "EY
3021-34F
0° Roll 3° Pitch
TARGET INVERTED
DYN RC - 1
0°
330°
300°
270°
240°
210°
180°
150°
120°
90°
60°
30°
0°

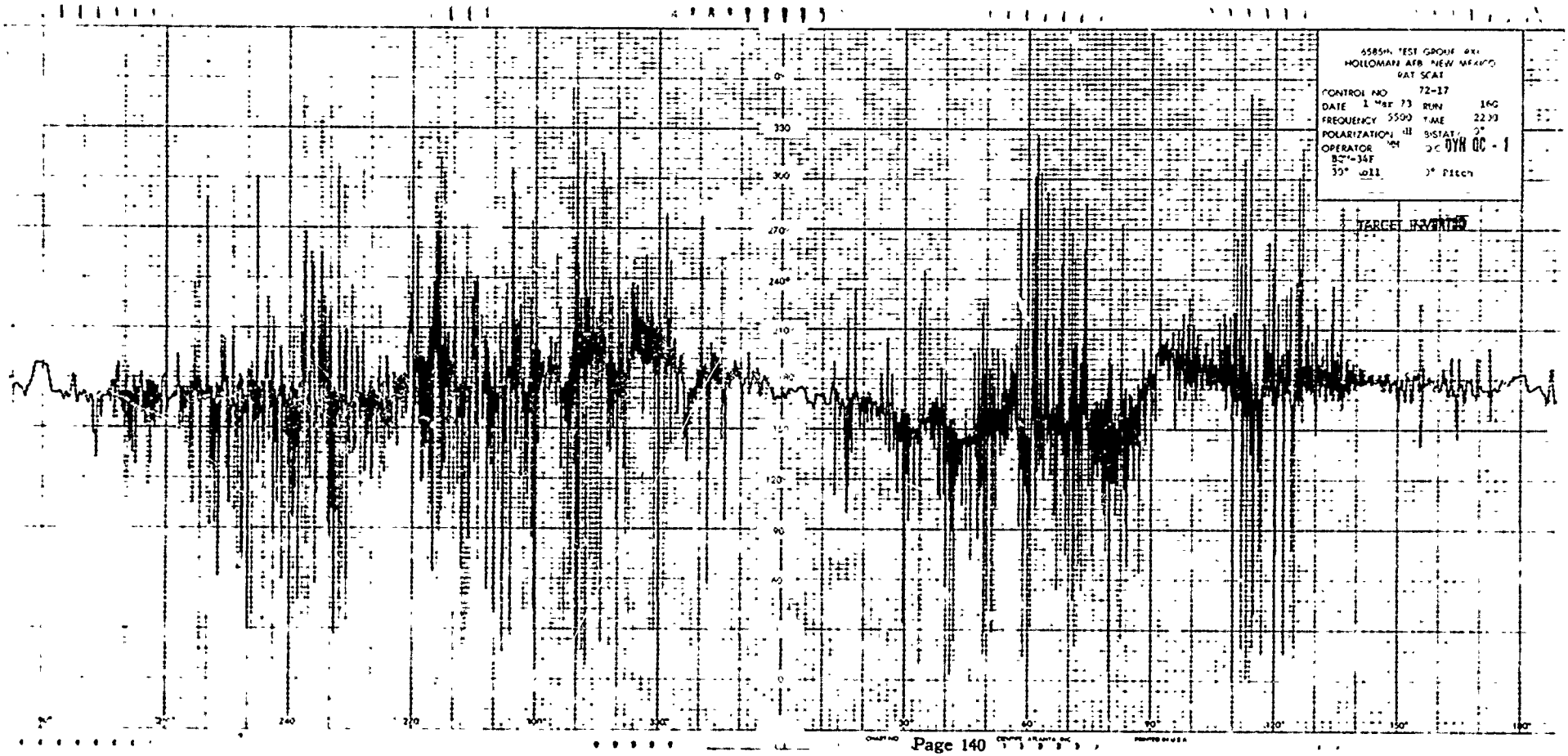

6585th TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 1 Mar 73 RUN 10A
FREQUENCY 5500 TIME 1513
POLARIZATION VV BISTAT C 0°
OPERATOR JSY Q C
304-34P
0° Roll 0° Pitch
+40
+30
+20
+10
0
-10
-20
-30
TARGET INVERTED
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

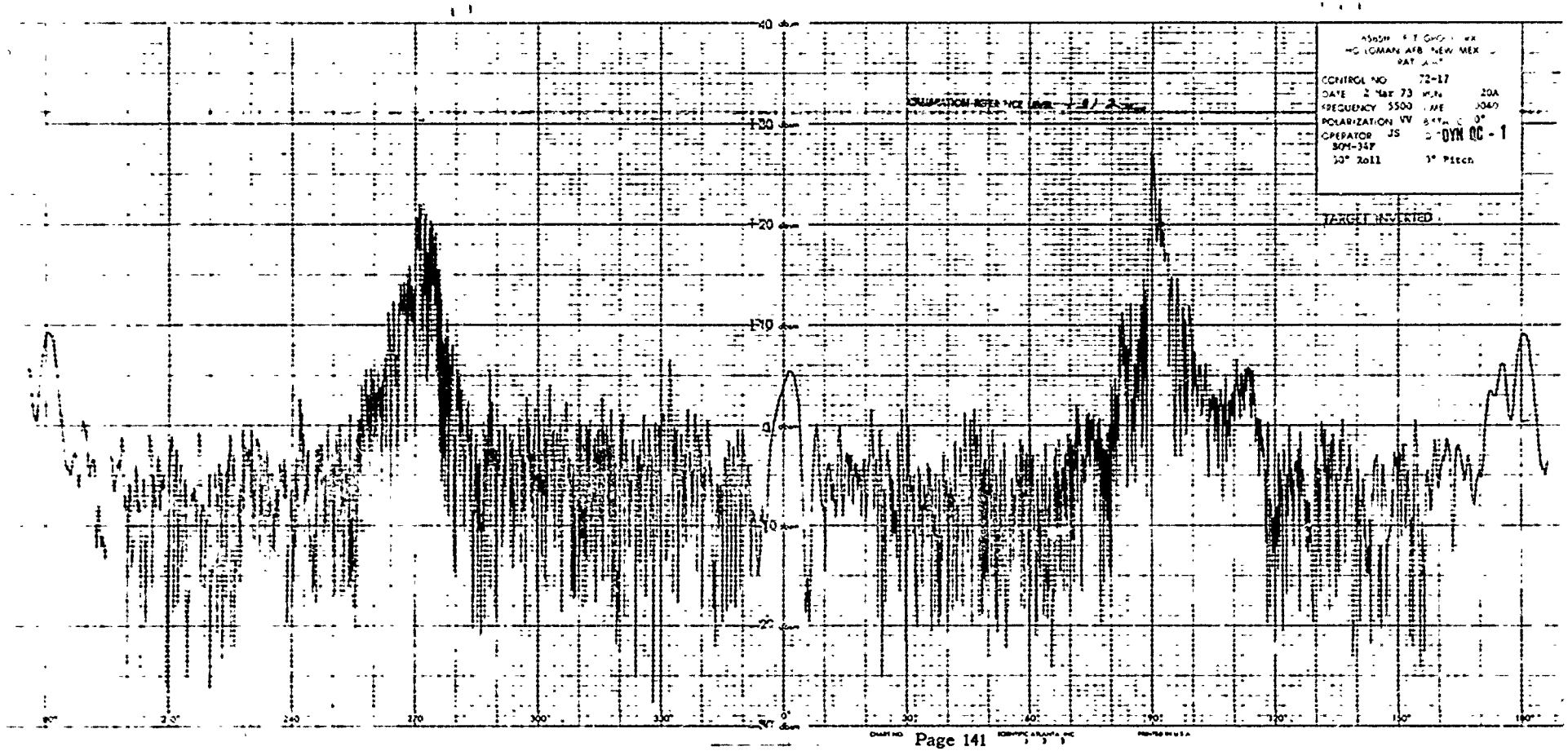

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO. 72-17
DATE 1 Mar 73 RUN 1UG
FREQUENCY 5500 TIME 1510
POLARIZATION VV BISTATIC 0°
OPERATOR RH QC DYR BC - I
30M-34F
3° Roll 3° Pitch
TARGET (INVERTED)
0°
330°
300°
270°
240°
210°
180°
150
120
90
60
30
0°
180°
210°
240°
270°
300°
330°
30
60
90
120
150
180°

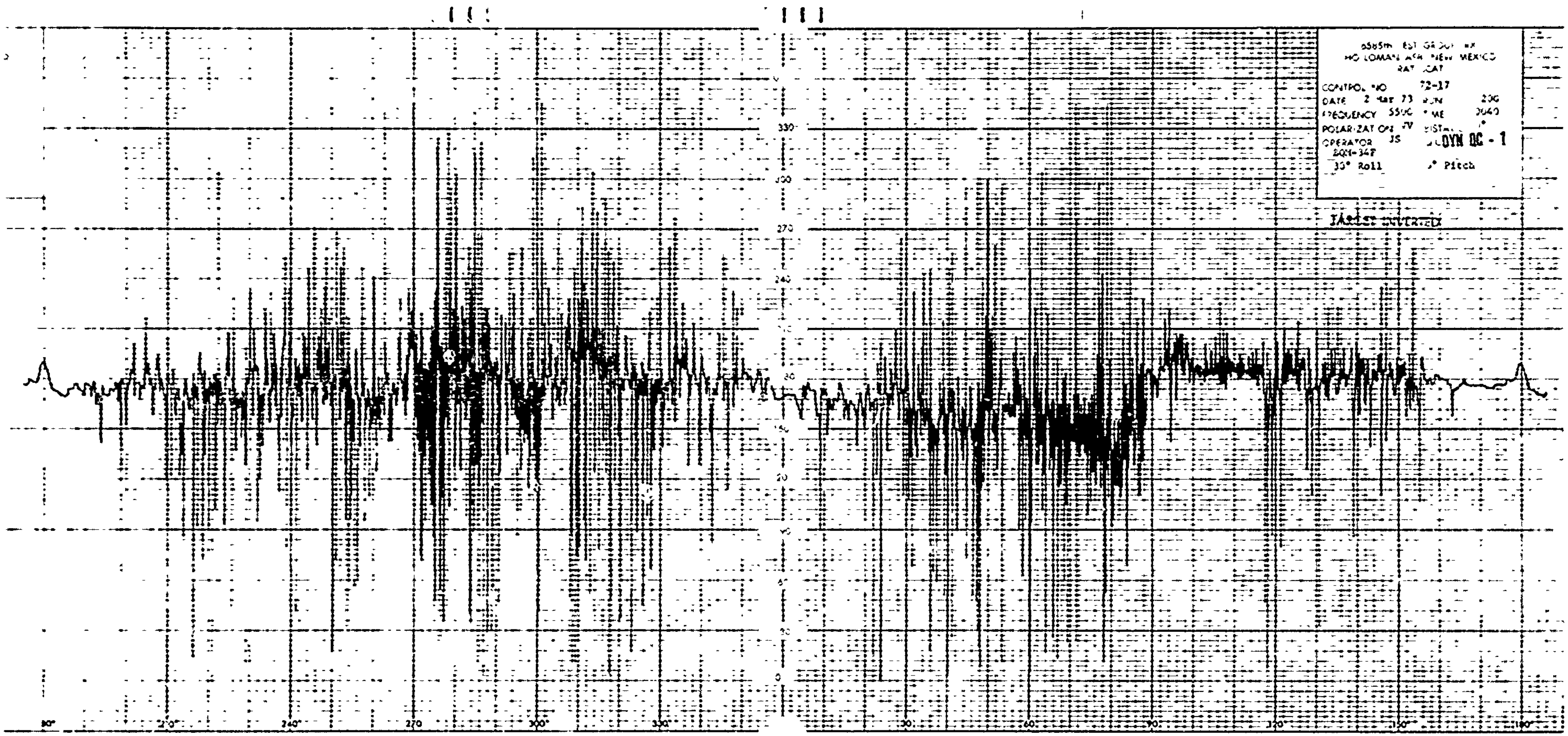

6585th TEST GROUP RX
HOLLOMAN AFB NEW MEX CO
RAT SCAT
CONTROL NO 72-17
DATE 1 MAR 73 RUN 12A
FREQUENCY 5590 TIME 1655
POLARIZATION VH BISTATIC 0°
OPERATOR SSI QC DYN QC - 1
30 dBsm
20 dBsm
10 dBsm
0 dBsm
10 dBsm
20 dBsm
30 dBsm
40 dBsm
0°
30
60
90
120
150
180
210
240
270
300
330

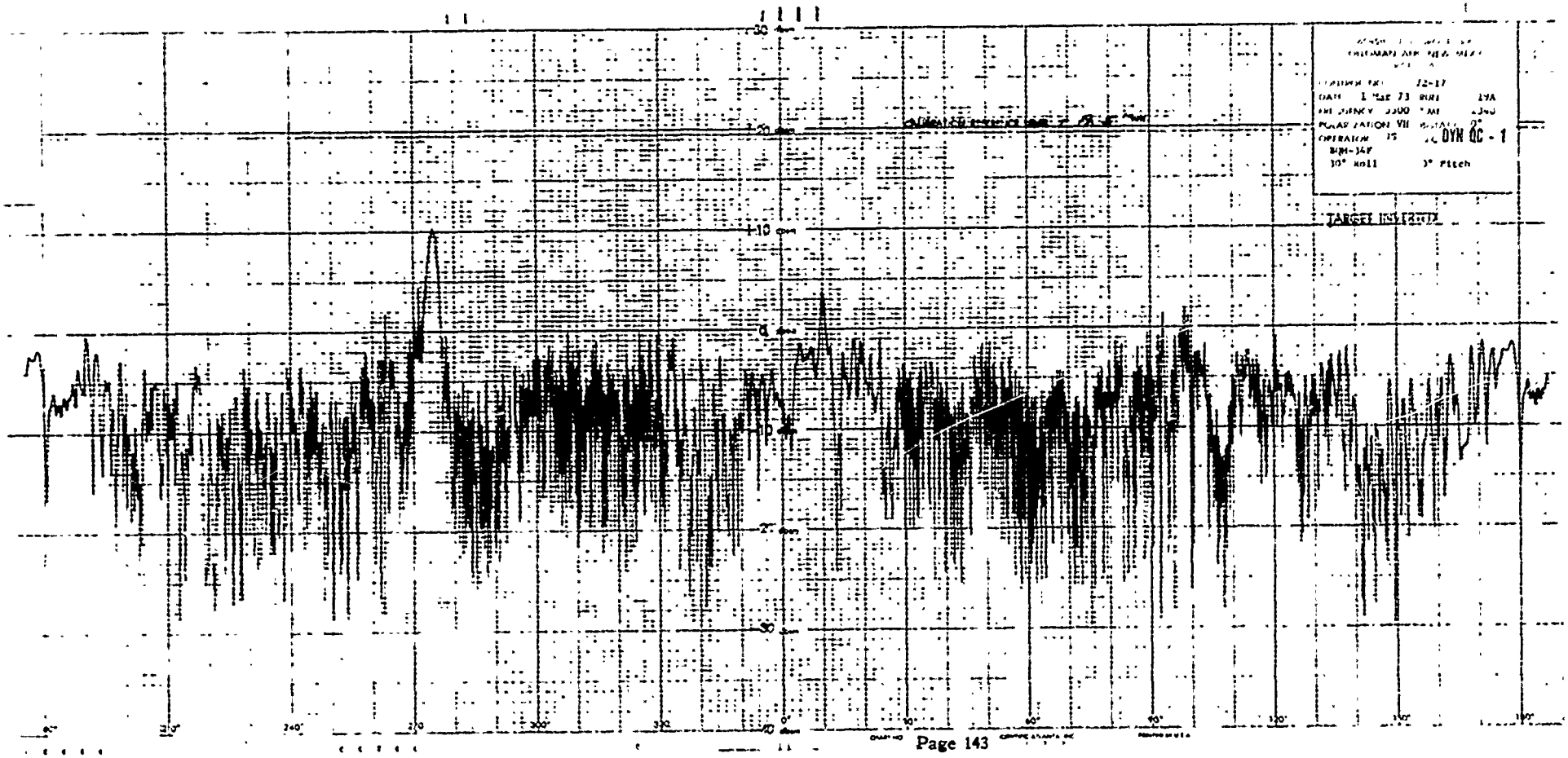

6585th TEST GROUP RX
HOLLOMAN AFB NEW MEX CO
RAT SCAT
CONTROL NO 72-17
DATE 1 Mar 73 RUN 22G
FREQUENCY 5500 TIME 1655
POLARIZATION VH BISTATIC 0°
OPERATOR [illegible] QC DYNOGC-I
BQM-34F
0° Roll 0° Pitch
TARGET (S/C/PETS)
0°
330°
300°
270°
240°
210°
180°
150°
120°
90°
60
30
0°

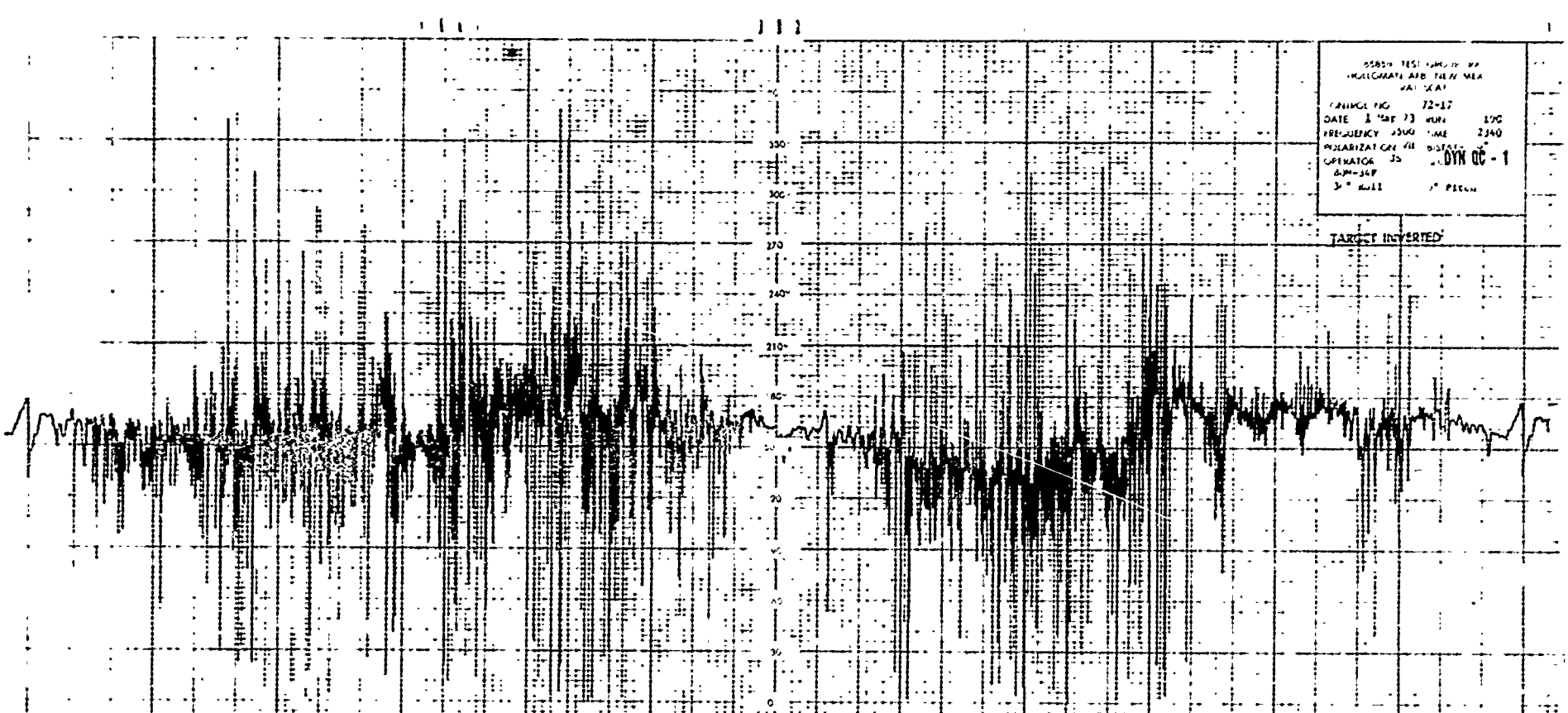

CONTROL NO 72-17
DATE 1 Mar 73
RUN 16A
FREQUENCY 9500
POLARIZATION HH
OPERATOR
80°-34F
30° roll
CODYN QC - 1
CALIBRATION REFERENCE LEVEL
TARGET INVERTED
+40 dBsm
+30 dBsm
+20 dBsm
+10 dBsm
0 dBsm
-10 dBsm
-20 dBsm
-30 dBsm
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

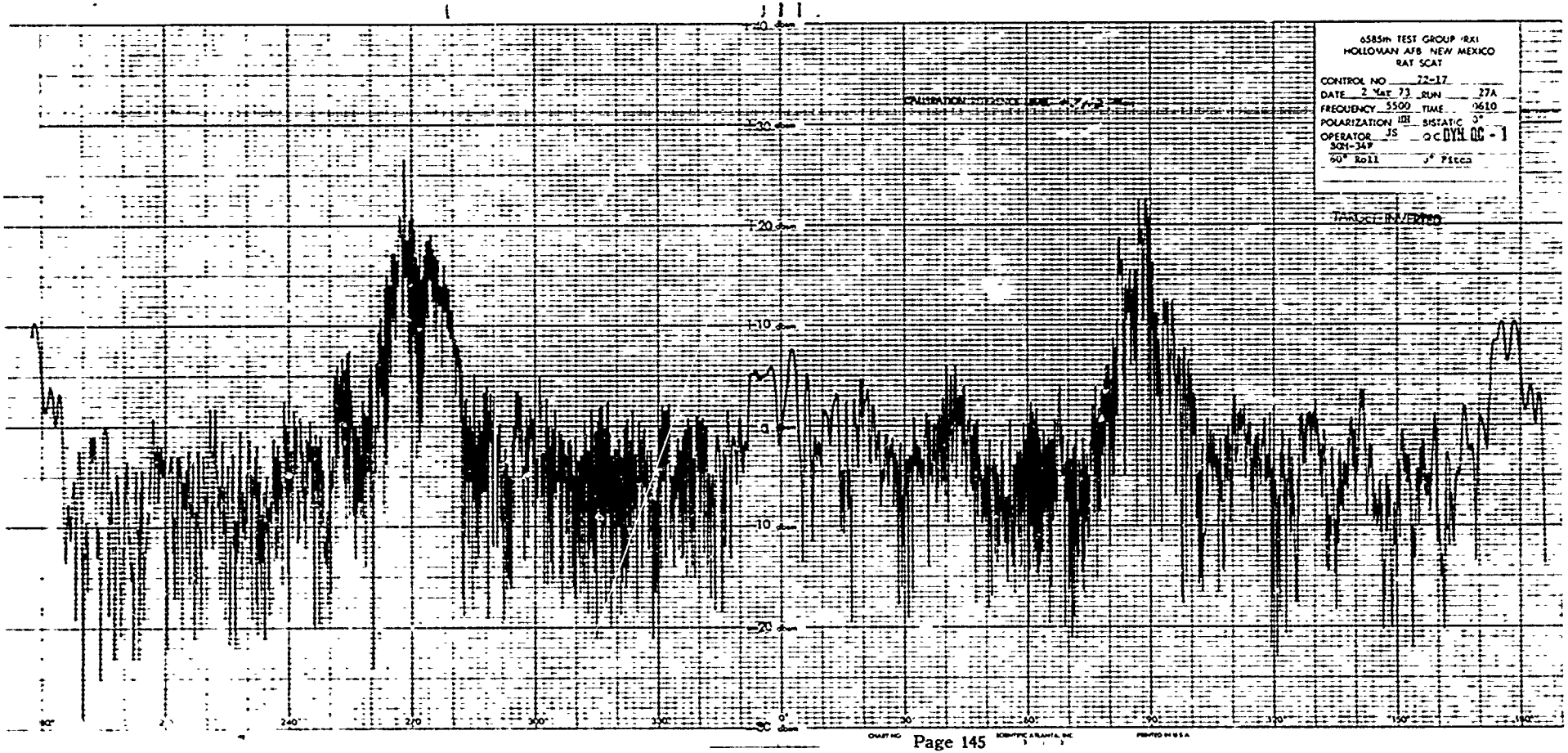

6585th TEST GROUP (XI)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 1 Mar 73
RUN 16G
FREQUENCY 5590
TIME 2233
POLARIZATION HH
BISTAT 0°
OPERATOR MH
OYH QC - 1
85°-36F
35° roll
0° Pitch
TARGET REVERSED

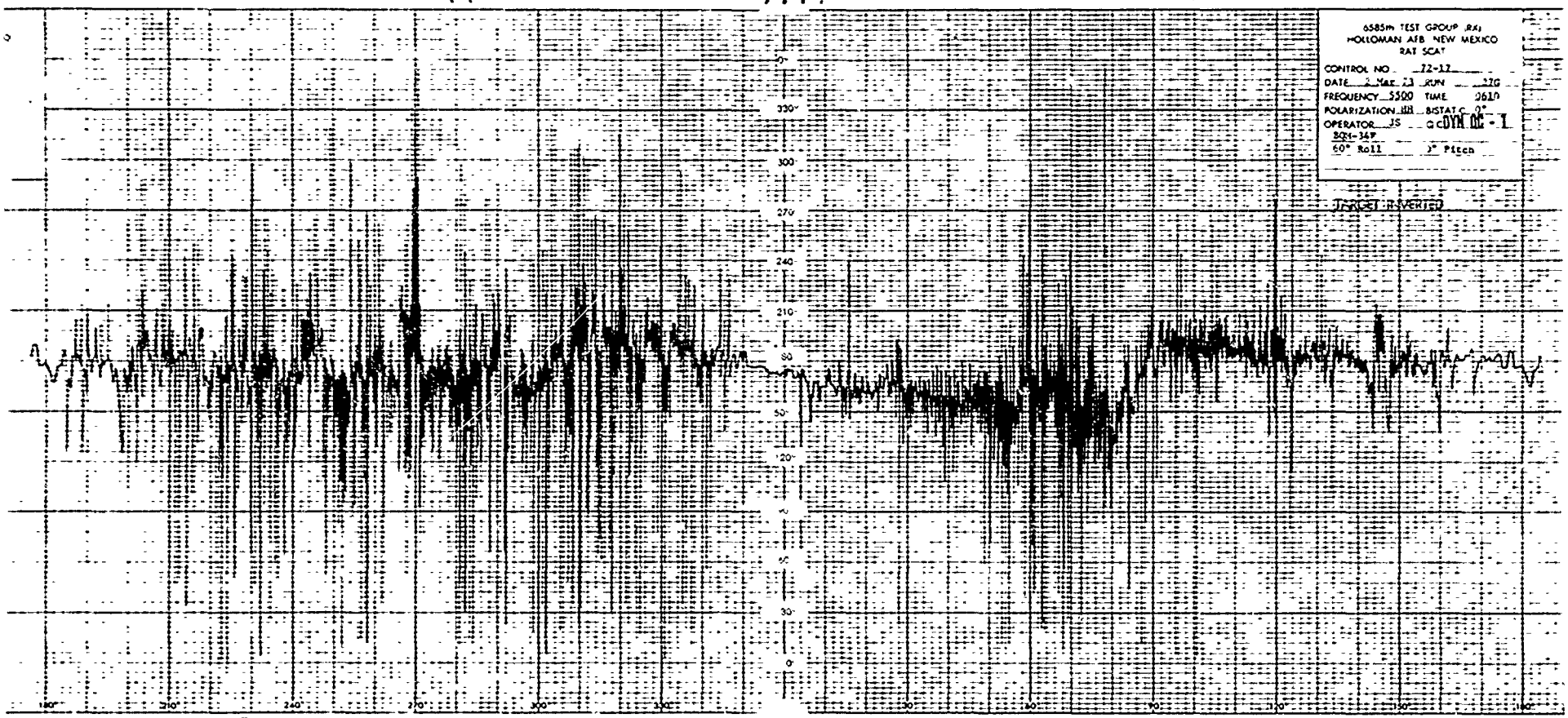

CONTROL NO 72-17
DATE 2 Mar 73
FREQUENCY 5500
POLARIZATION VV
OPERATOR JS
30M-34F
30° Roll
1° Pitch
TARGET INVERTED
+40
+30
+20
+10
0
-10
-20
-30
0°
30°
60°
90°
120°
150°
180°
210°
240°
270°
300°
330°

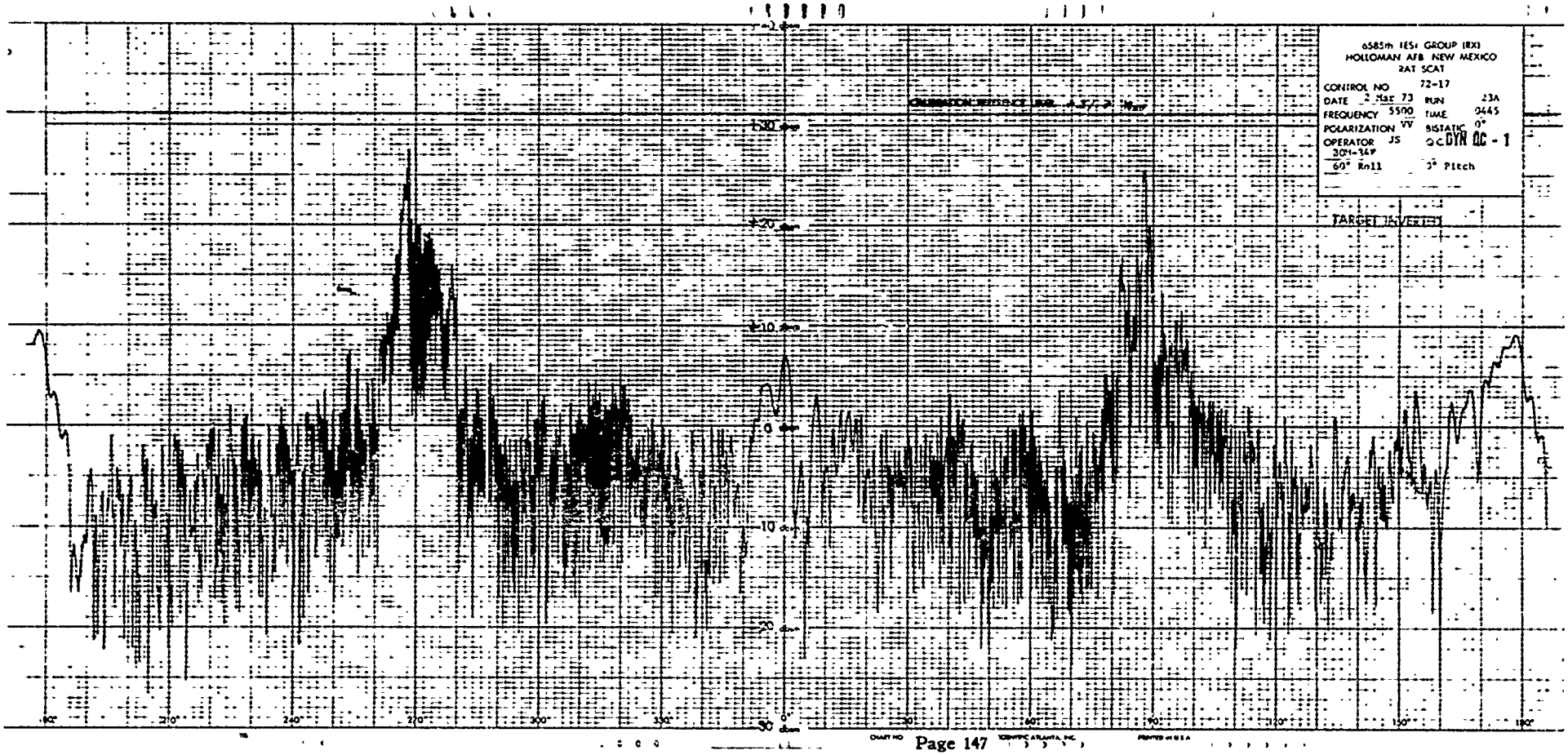

CONTROL NO 72-17
DATE 2 Mar 73
FREQUENCY 5500
OPERATOR JS
DYN DC - 1
35° Roll
Pitch

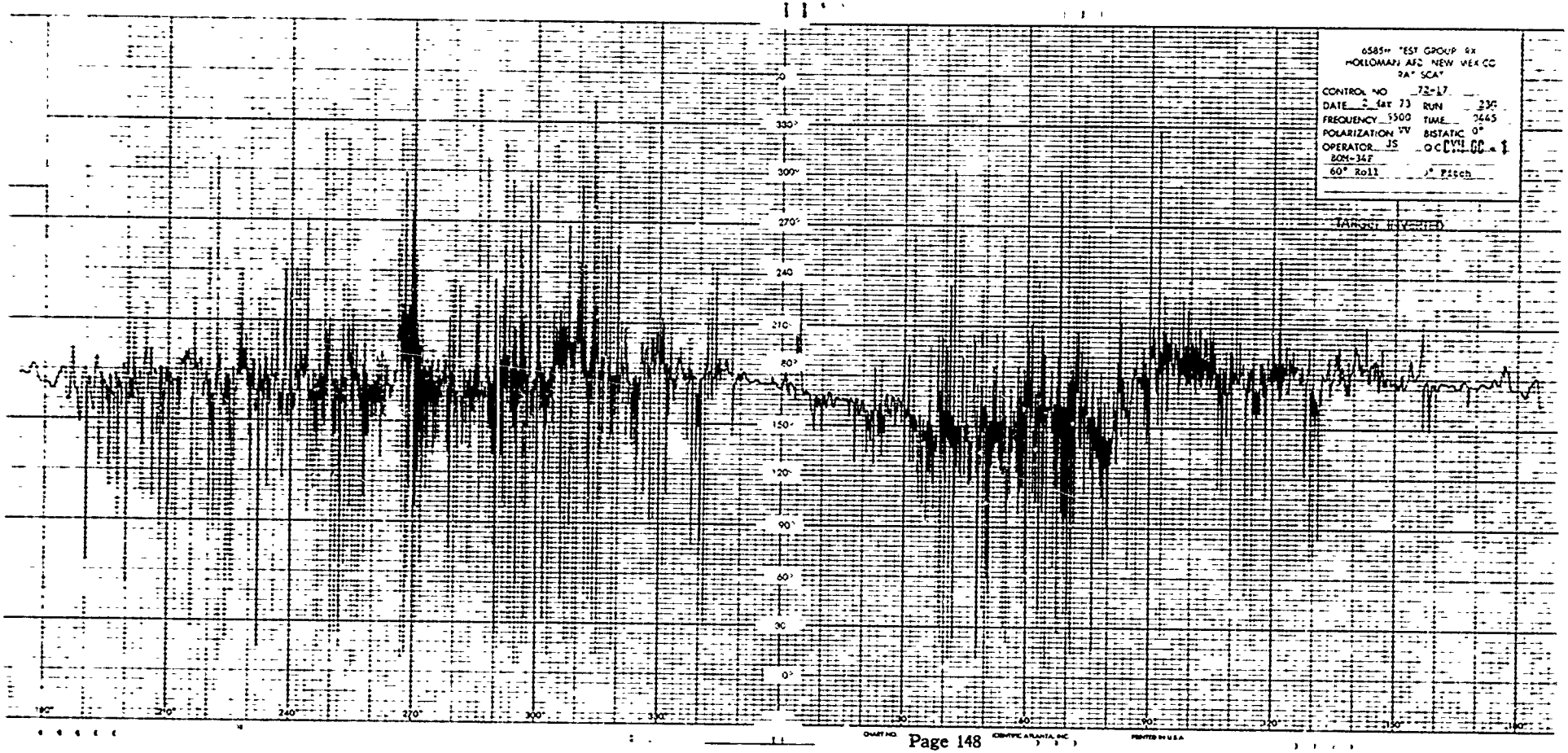

DYN QC - 1
TARGET INSERTED

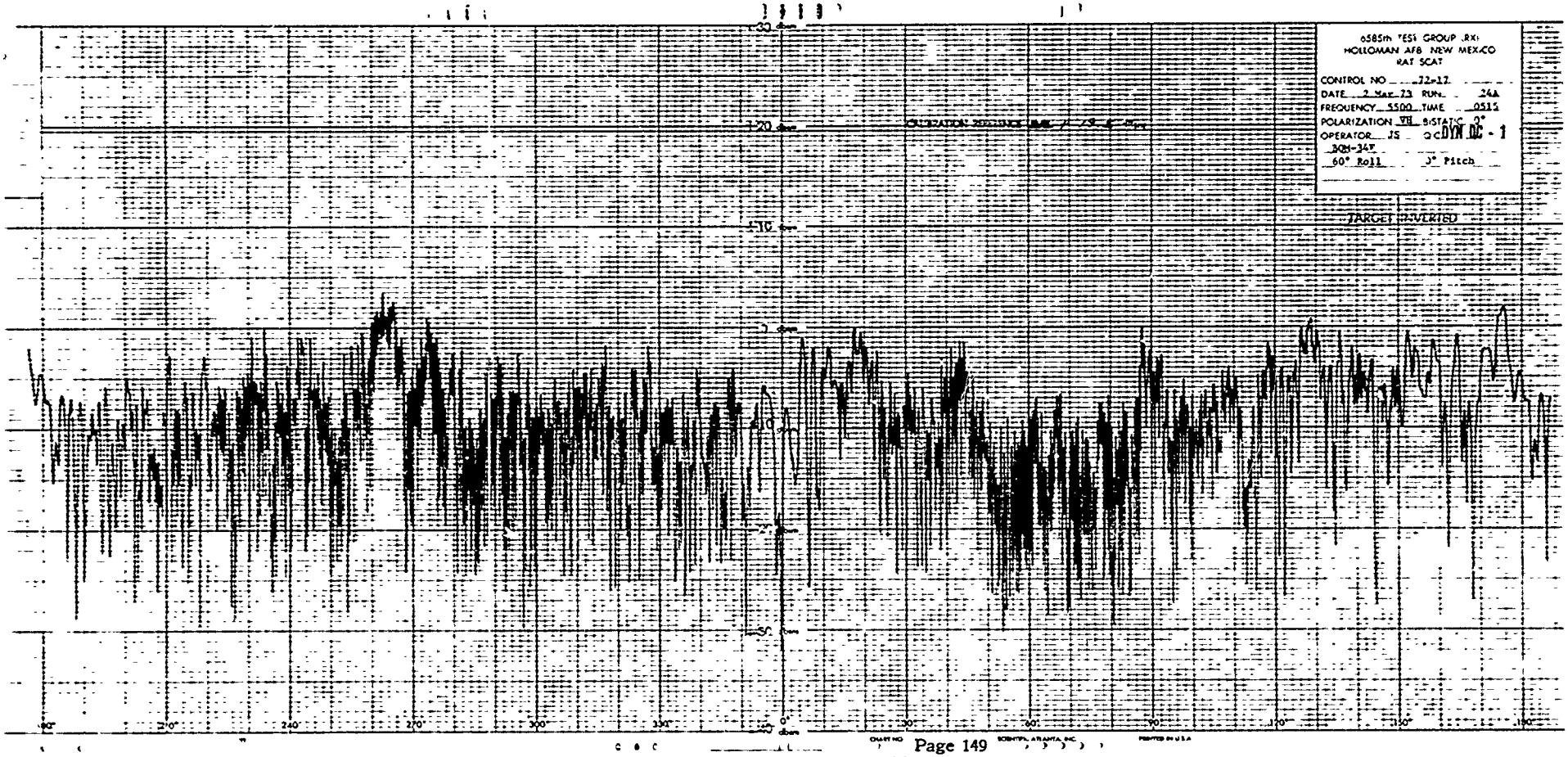

RANGE NO 72-17
DATE 1 SEP 73
RUN 1700
FREQUENCY 5500
TIME 2340
OPERATOR JS
DYN OC - 1
TARGET INVERTED
350°
300°
270°
240°
210°
60°
30°
20
10
0
180°
210°
240°
270°
300°
330°
30°
60°
90°
120°
150°
180°

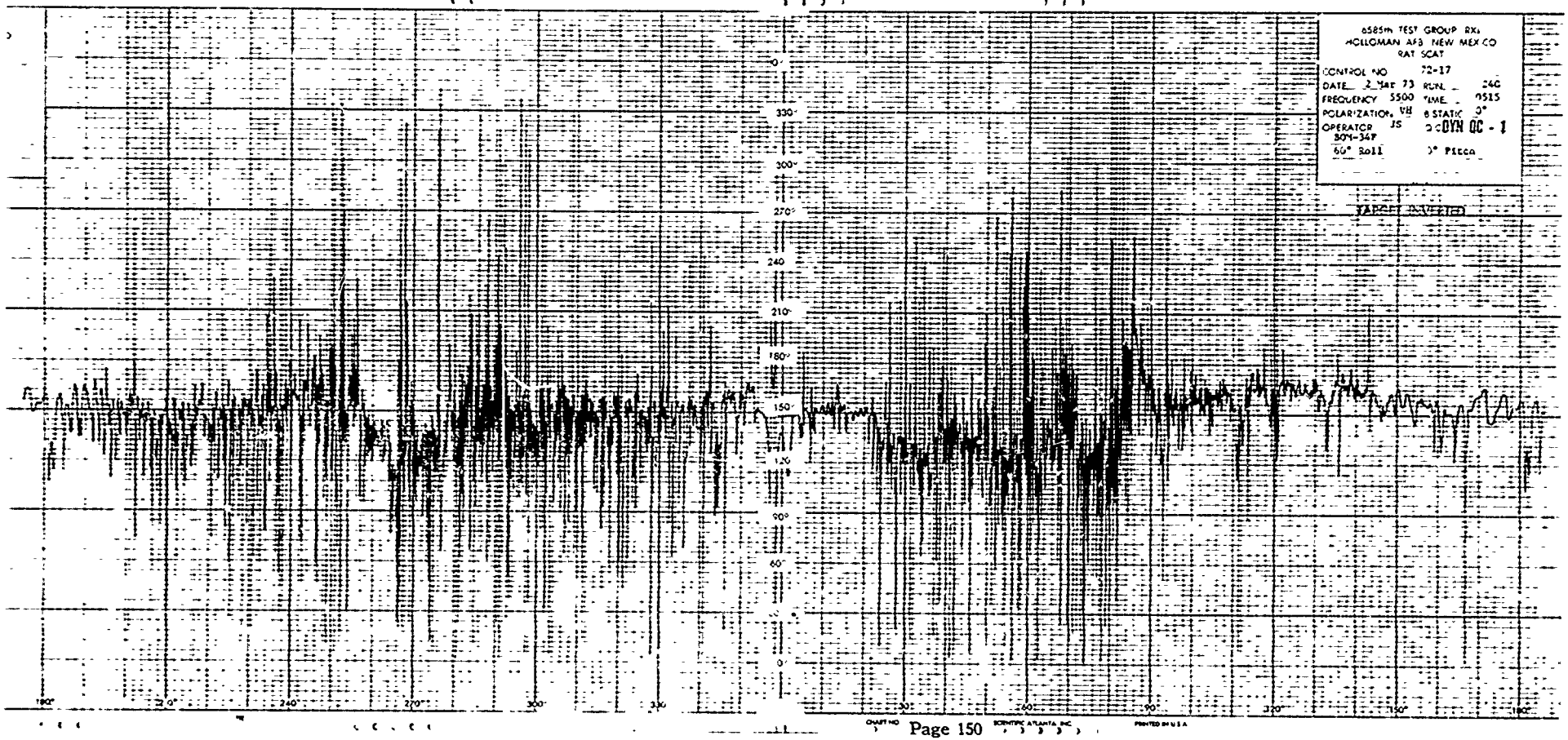

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 2 Mar 73 RUN 27A
FREQUENCY 5500 TIME 0610
POLARIZATION HH BISTATIC 0°
OPERATOR JS QC DYL QC - 1
30H-34P
60° Roll 5° Pitch
TARGET INVERTED
+40 dbsm
+30 dbsm
+20 dbsm
+10 dbsm
0
-10 dbsm
-20 dbsm
-30 dbsm
90°
120°
150°
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

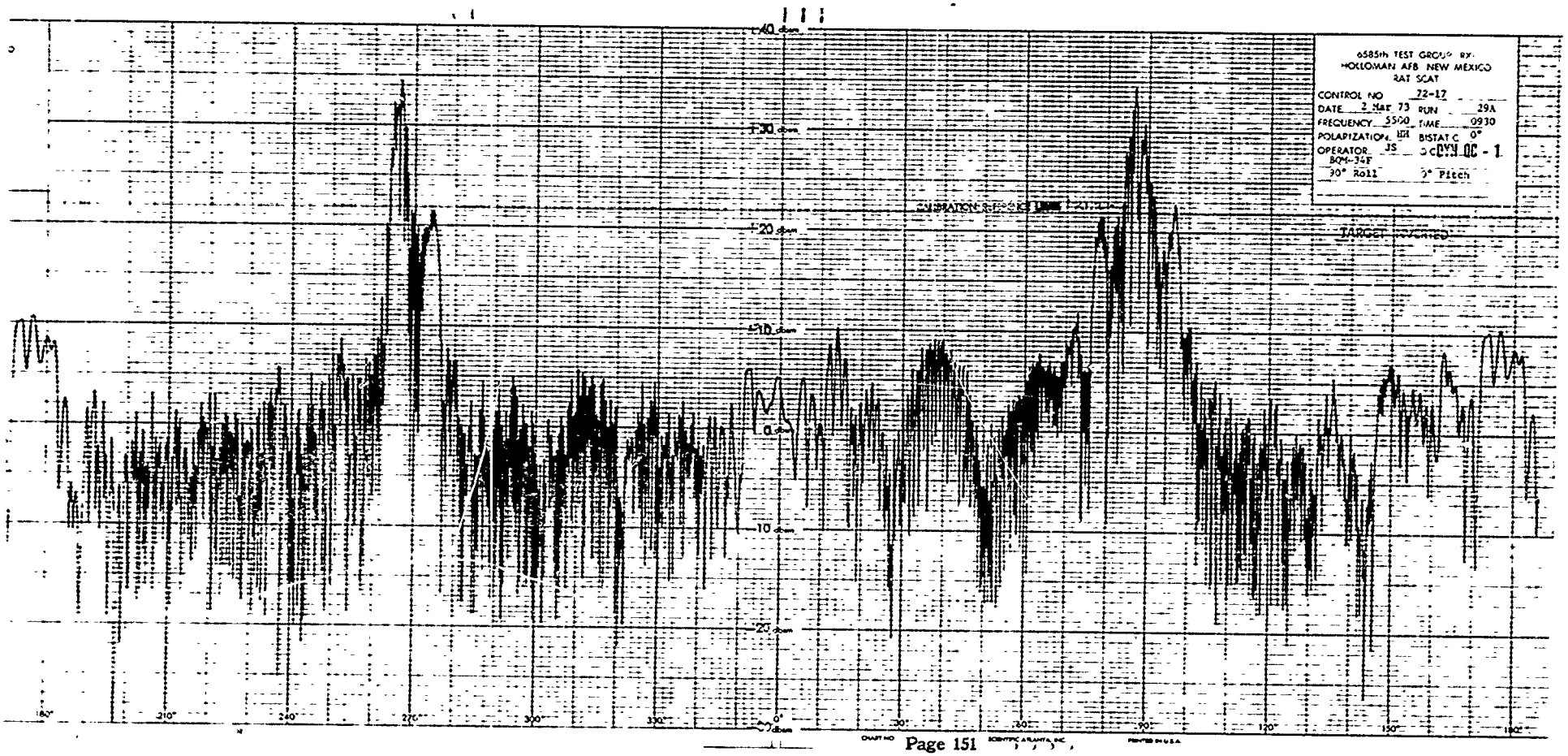

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO. 72-17
DATE 2 MAR 73 RUN 22G
FREQUENCY 5500 TIME 2610
POLARIZATION HH BISTAT C 0°
OPERATOR JS GC DYN OC - 1
BQM-34F
60° Roll 0° Pitch
JACKET REVERTED
330°
300°
270°
240°
210°
80
50
20
90
30
0
180°
210°
240°
270°
300°
330°
30°
60°
90°
120°
150°
180°

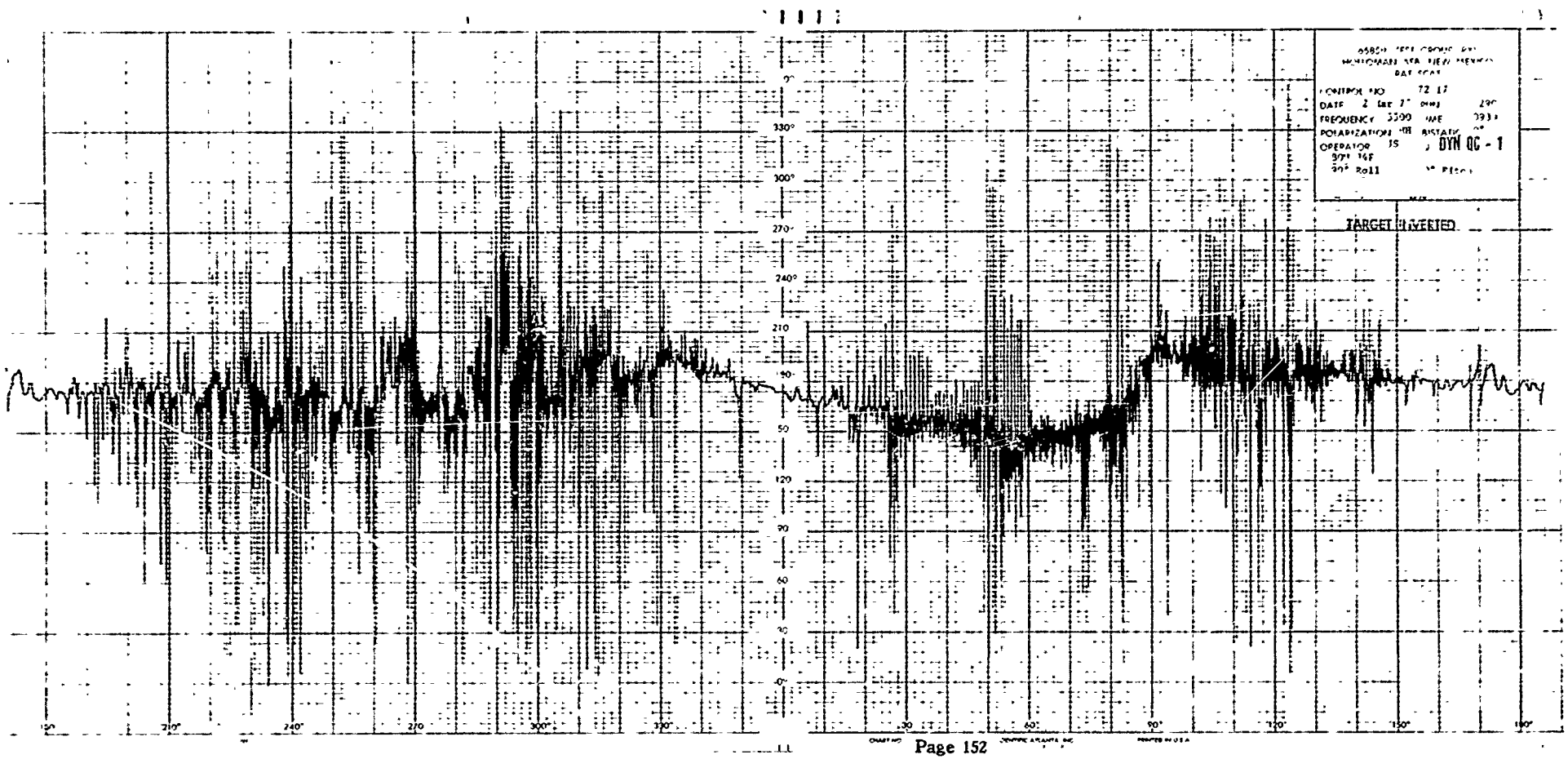

6585m IESt GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 2 Mar 73 RUN 23A
FREQUENCY 5500 TIME 0445
POLARIZATION VV BISTATIC 0°
OPERATOR JS
20°I-34°P
60° Roll 3° Pitch
DYN QC - 1
TARGET (AVERTED)
-1 dbsm
+30 dbsm
+20 dbsm
+10 dbsm
0 dbsm
-10 dbsm
-20 dbsm
-30 dbsm
90°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

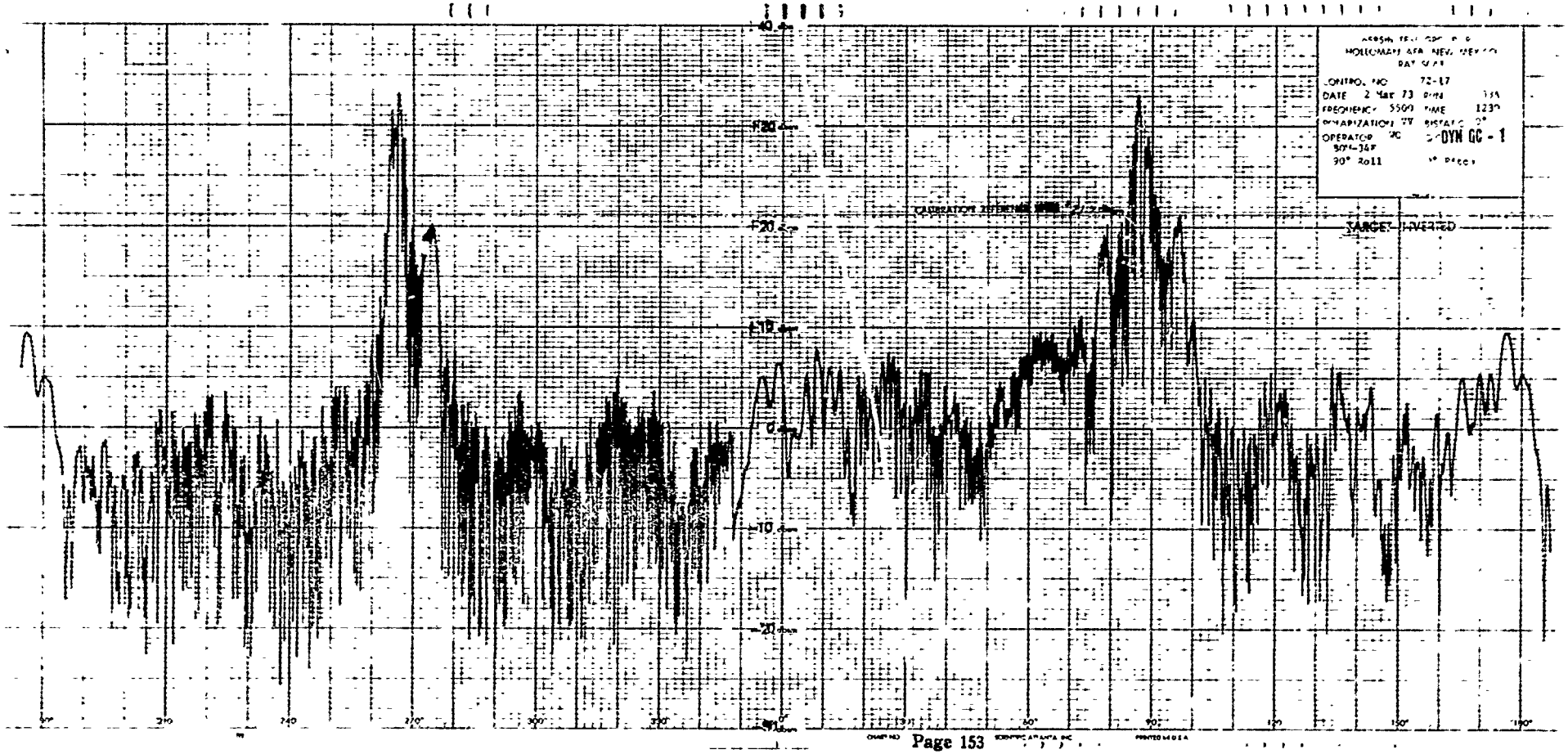

6585th TEST GROUP 9x
HOLLOMAN AFB NEW MEXICO
RAE SCAT
CONTROL NO 73-17
DATE 2 Jan 73
RUN 230
FREQUENCY 5500
TIME 0445
POLARIZATION VV
BISTATIC 0°
OPERATOR JS
OC CVU GC - 1
80M-347
60° Roll
0° Pitch
TARGET INVERTED
0°
30°
60°
90°
120°
150°
180°
210°
240°
270°
300°
330°

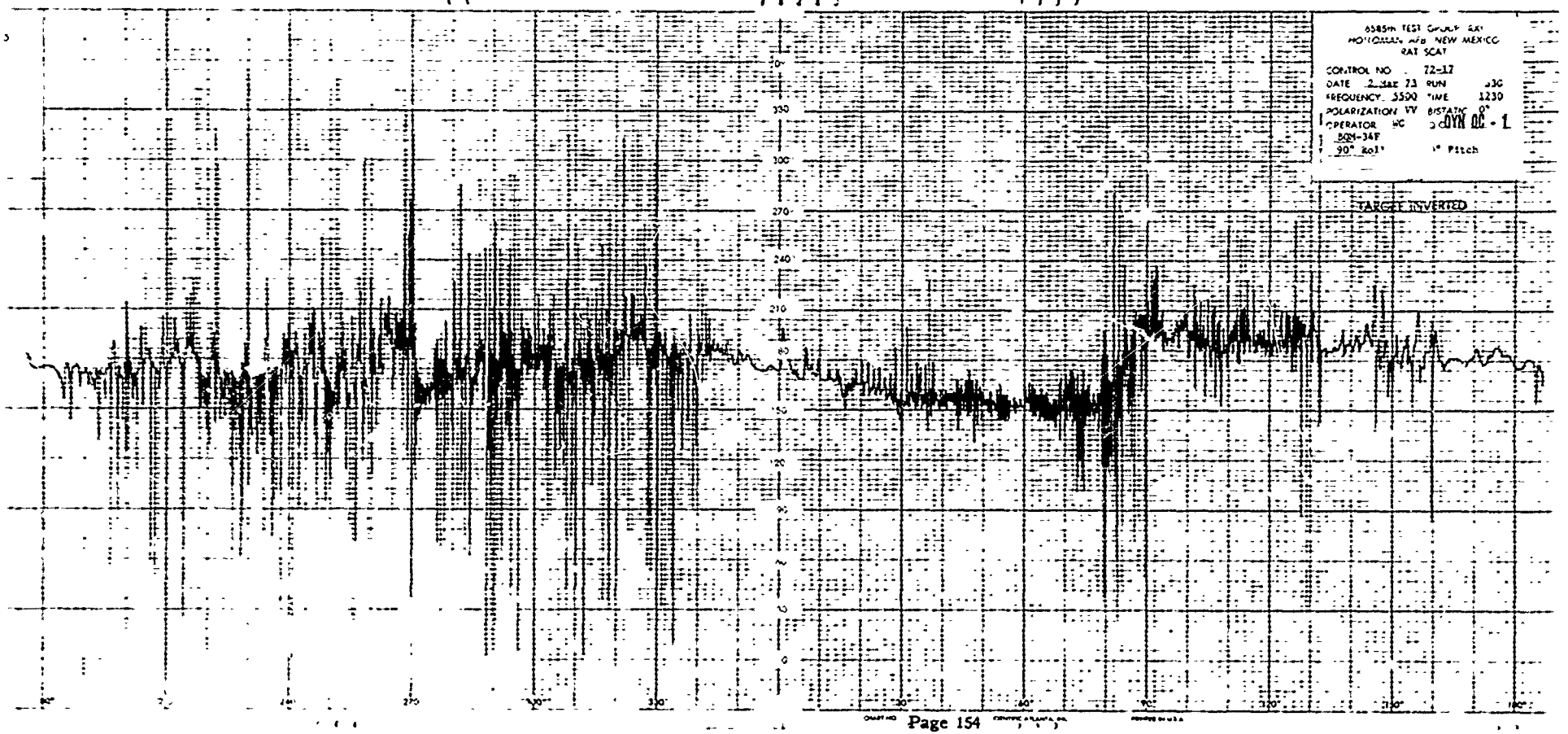

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-12
DATE 2 Mar 73 RUN 24A
FREQUENCY 5500 TIME 0515
POLARIZATION VH BISTATIC 0°
OPERATOR JS QC DYN RC - 1
30M-34F
60° Roll 3° Pitch
TARGET INVERTED
-30 dbsm
-20 dbsm
-10 dbsm
0 dbsm
-10 dbsm
-20 dbsm
-30 dbsm
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

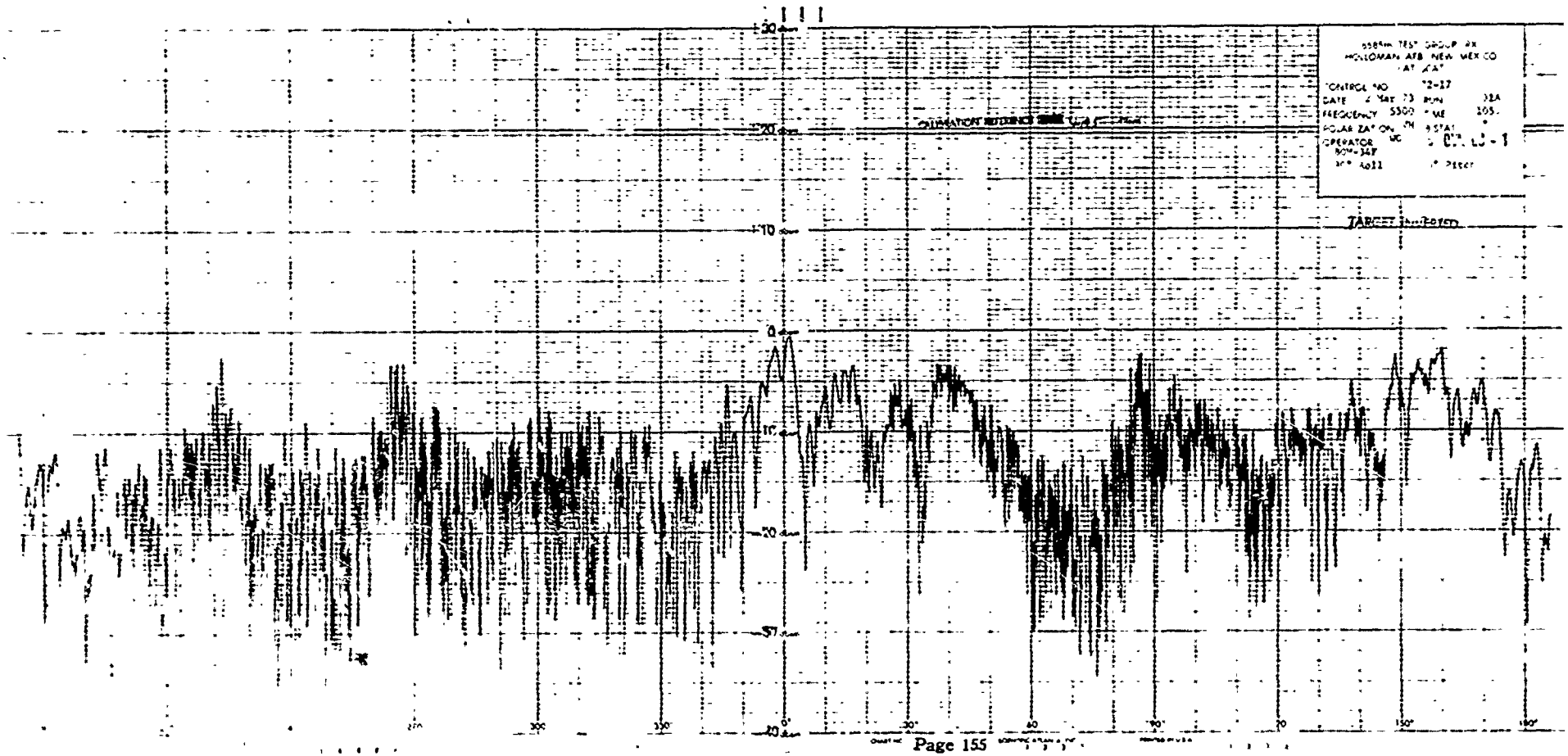

6585th TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 2 MAR 73 RUN 240
FREQUENCY 5500 TIME 0515
POLARIZATION VH θ STATIC 0°
OPERATOR JS
80%-34P
60° Roll
TARGET INVERTED
330°
300°
270°
240
210°
180°
150°
120
90°
60°
30°
0°

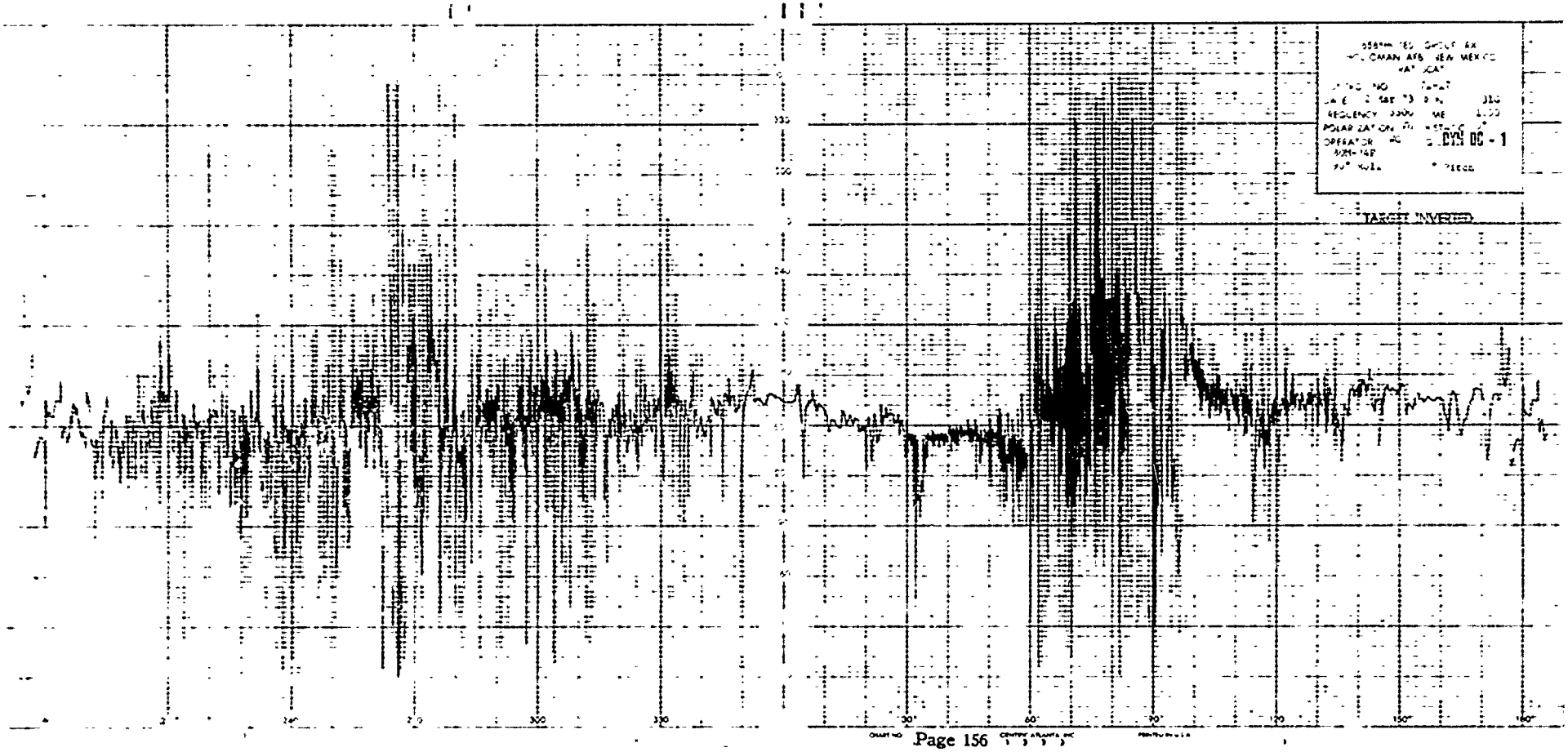

6585th TEST GROUP (S) AF
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 2 MAR 73 RUN 29A
FREQUENCY 5500 TIME 0930
POLARIZATION HH BISTAT C 0°
OPERATOR JS
BOM-34F
30° Roll 0° Pitch
DYN QC - 1
TARGET (VERTICAL)
40 dbsm
30 dbsm
20 dbsm
10 dbsm
0 dbsm
-10 dbsm
-20 dbsm
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

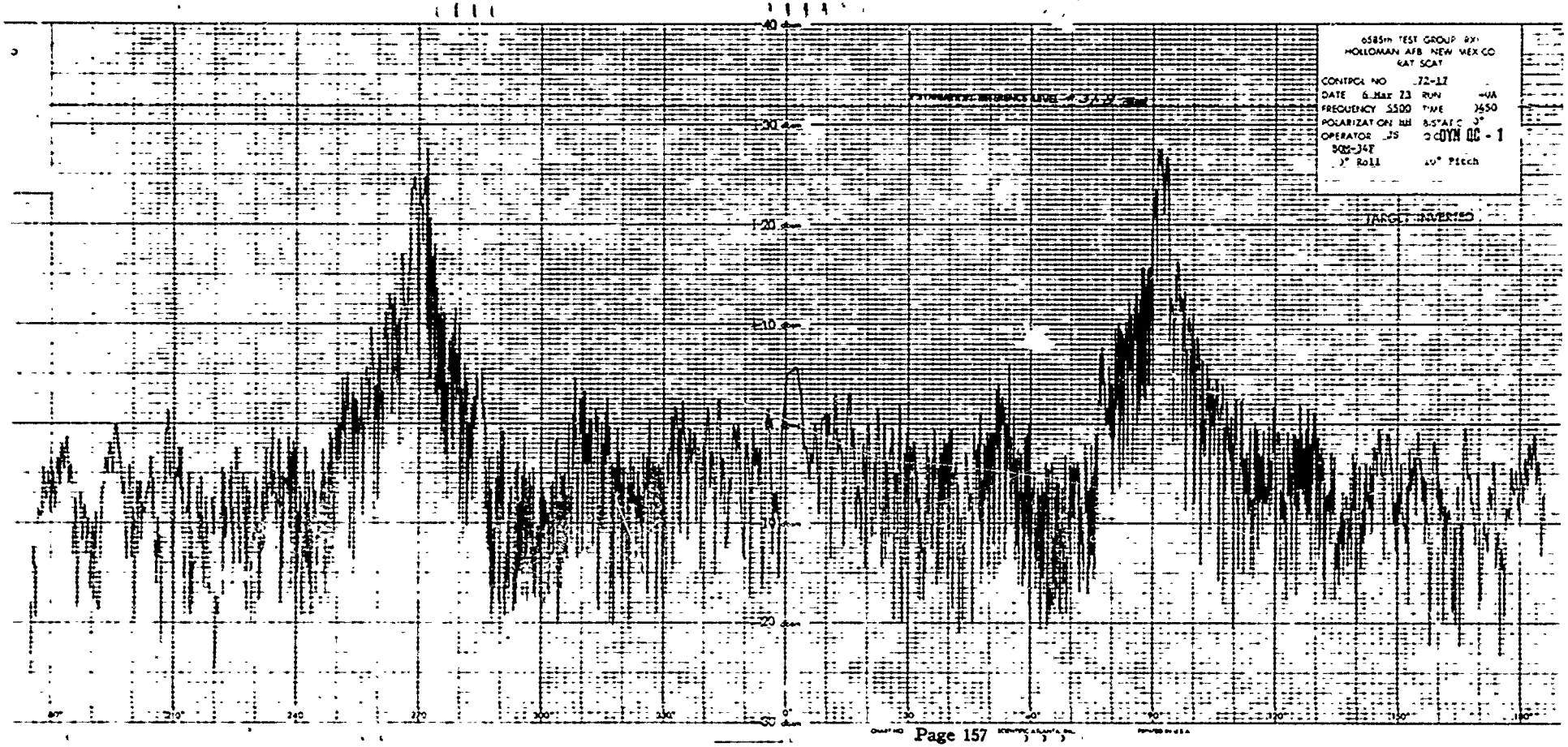

CONTROL NO 72 17
DATE 2 Mar 77
FREQUENCY 5500
OPERATOR JS
DYN QC - 1
TARGET INVERTED
9°
330°
300°
270°
240°
210
90
50
120
90
60
30
0°
150°

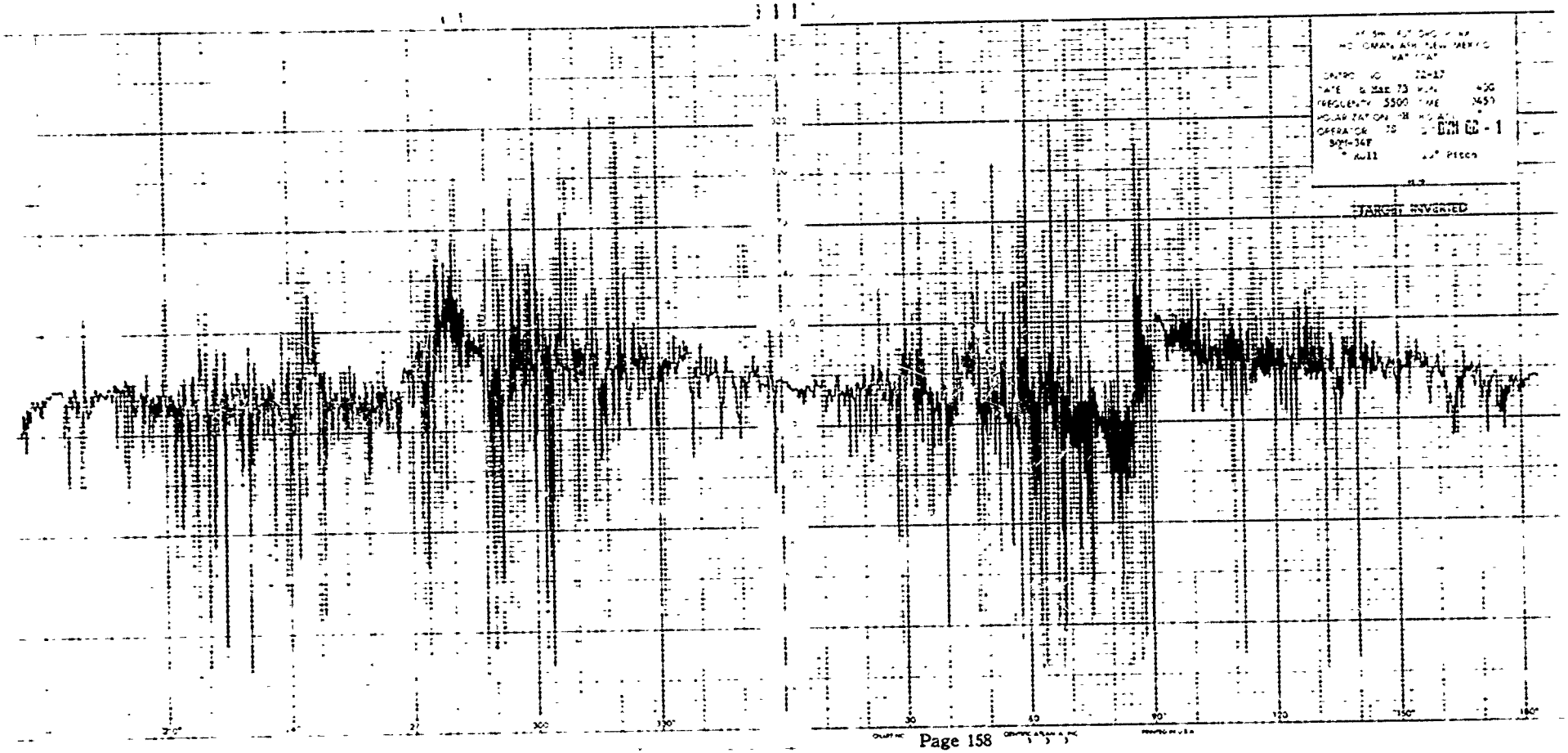

HOLLOMAN AFB NEW MEXICO
CONTROL NO 72-17
DATE 2 Mar 73
FREQUENCY 5500
OPERATOR JC
90° Roll
C-DYN QC - 1
TARGET INVERTED
40
30
20
10
0
-10
-20
0°
30°
60°
90°
120
150
180°
210
240
270°
300°
330°

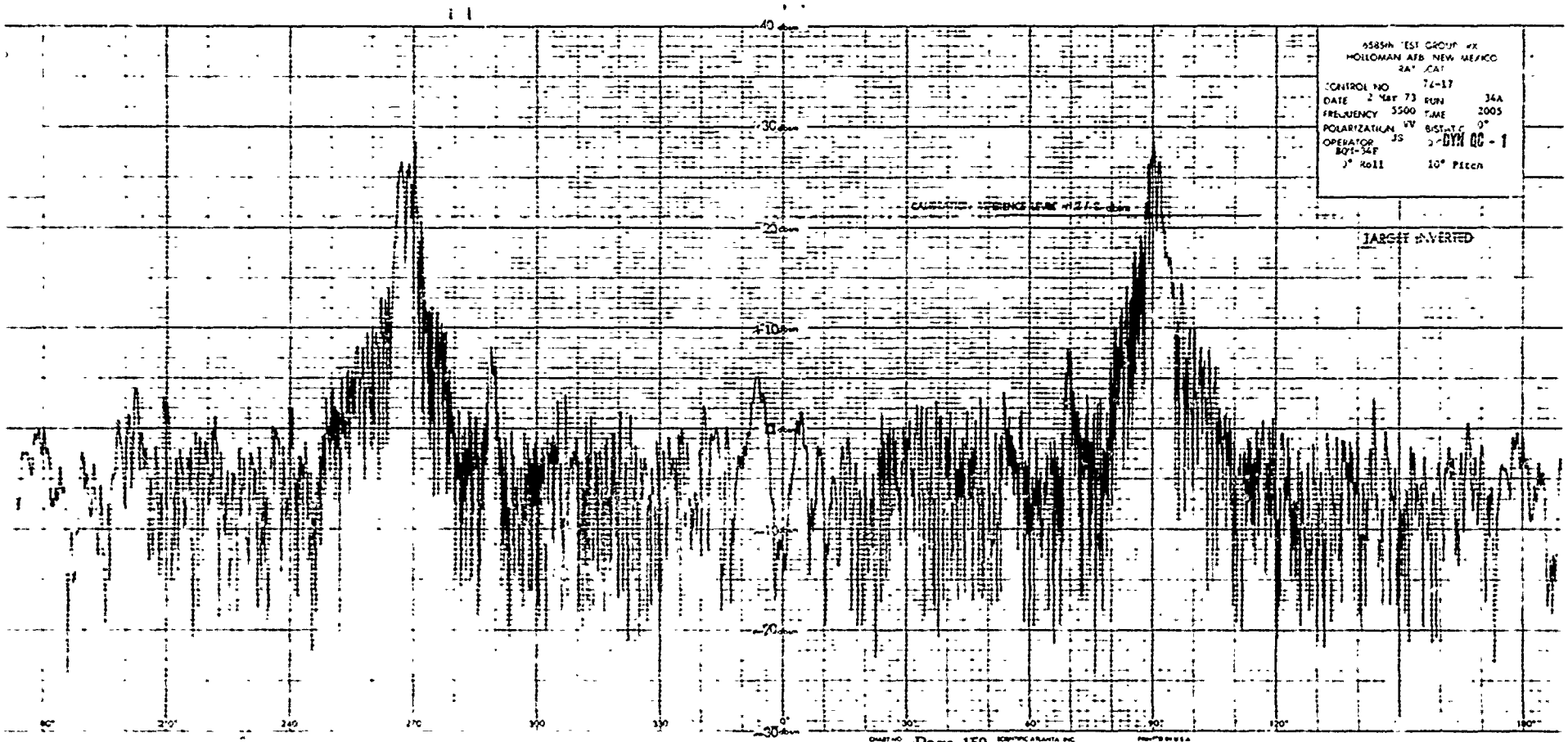

6585th TEST GROUP (AF)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 2 Mar 73
RUN a3G
FREQUENCY 5590
TIME 1230
POLARIZATION VV
BISTATIC 0°
OPERATOR HC
dDYN 00 - 1
30N-34F
90° Roll
0° Pitch
TARGET INVERTED

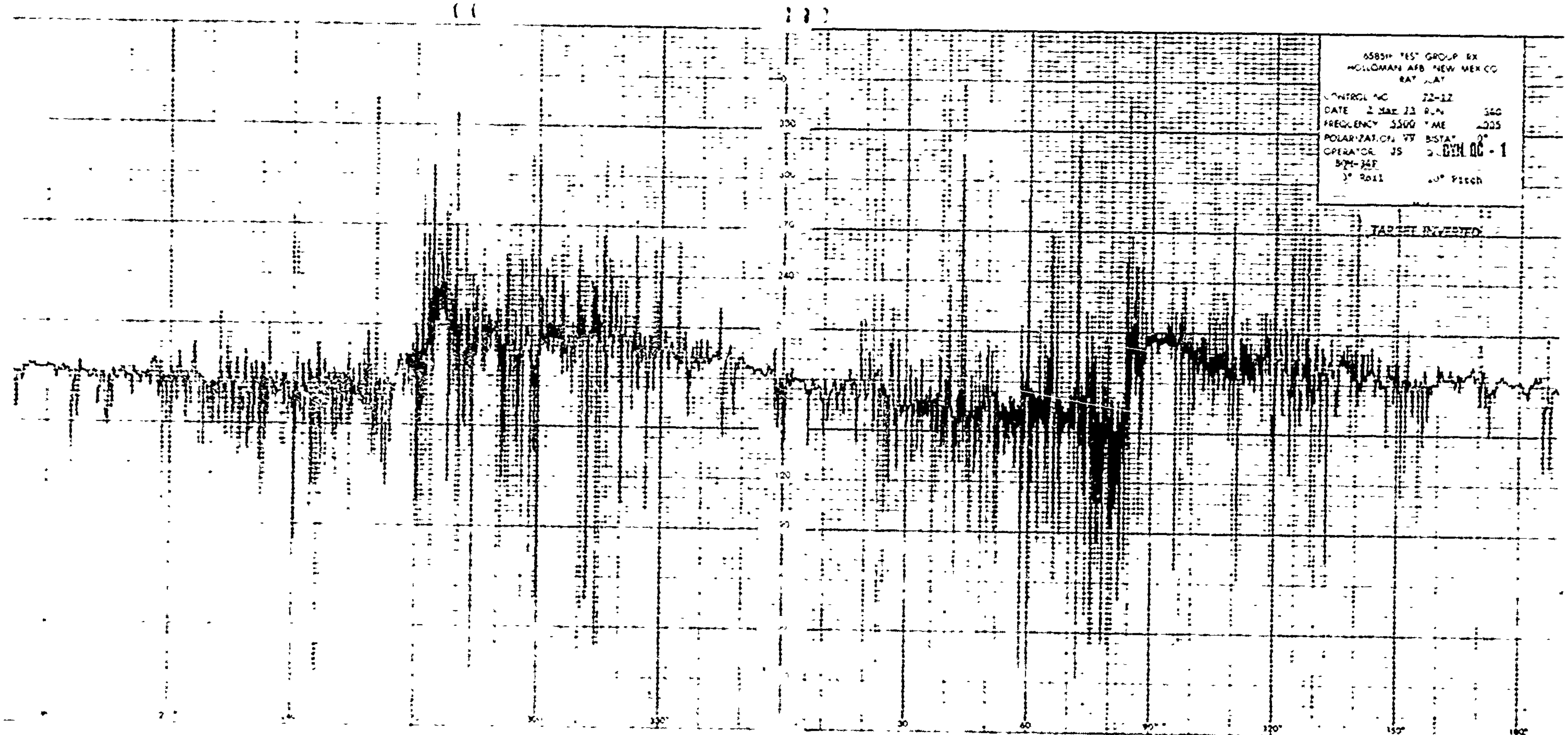

TARGET
-30
-20
-10
0
10
20
30
0°
30°
60°
90°
120°
150°
180°
210°
240°
270°
300°
330°

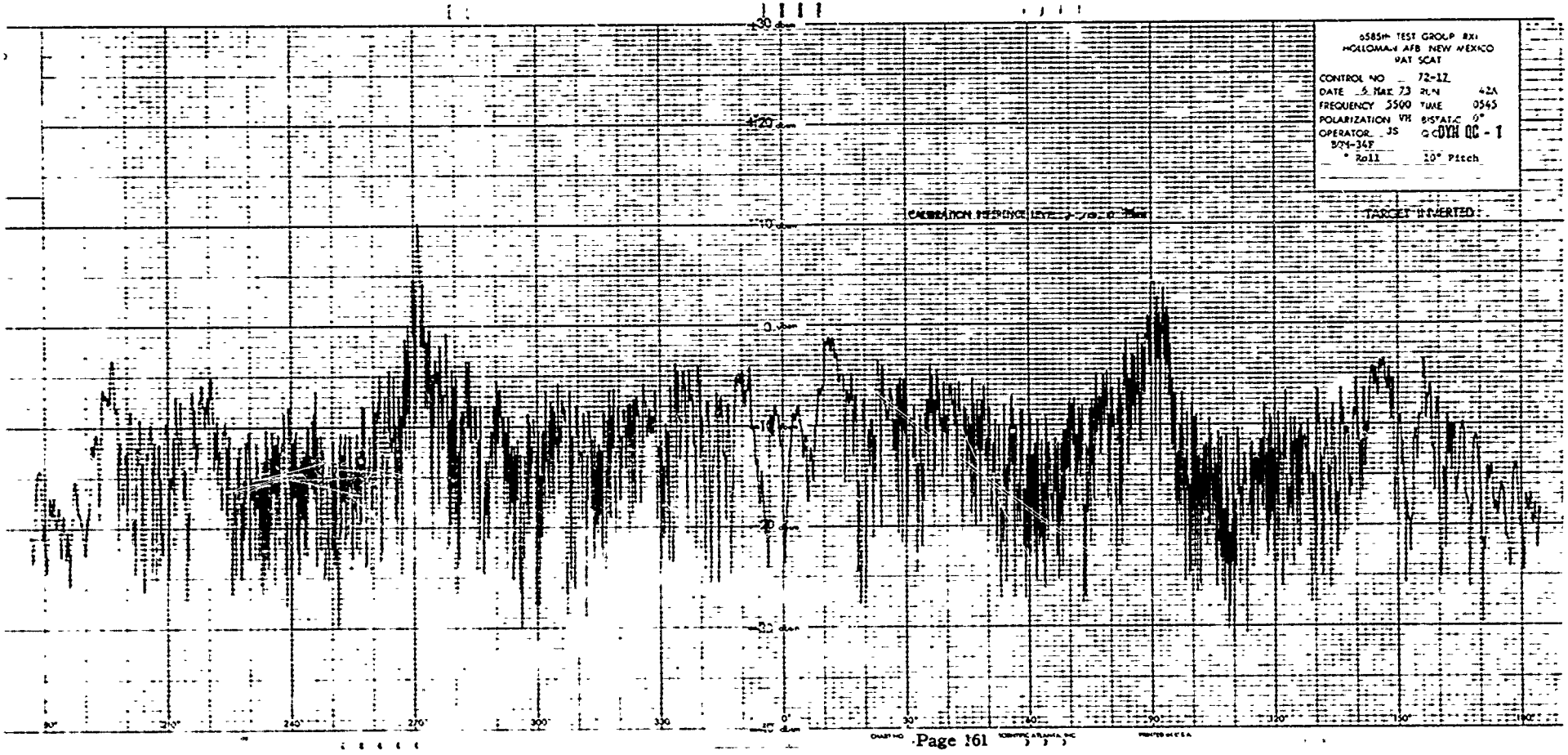

TARGET INVERTED
DYN DC - 1

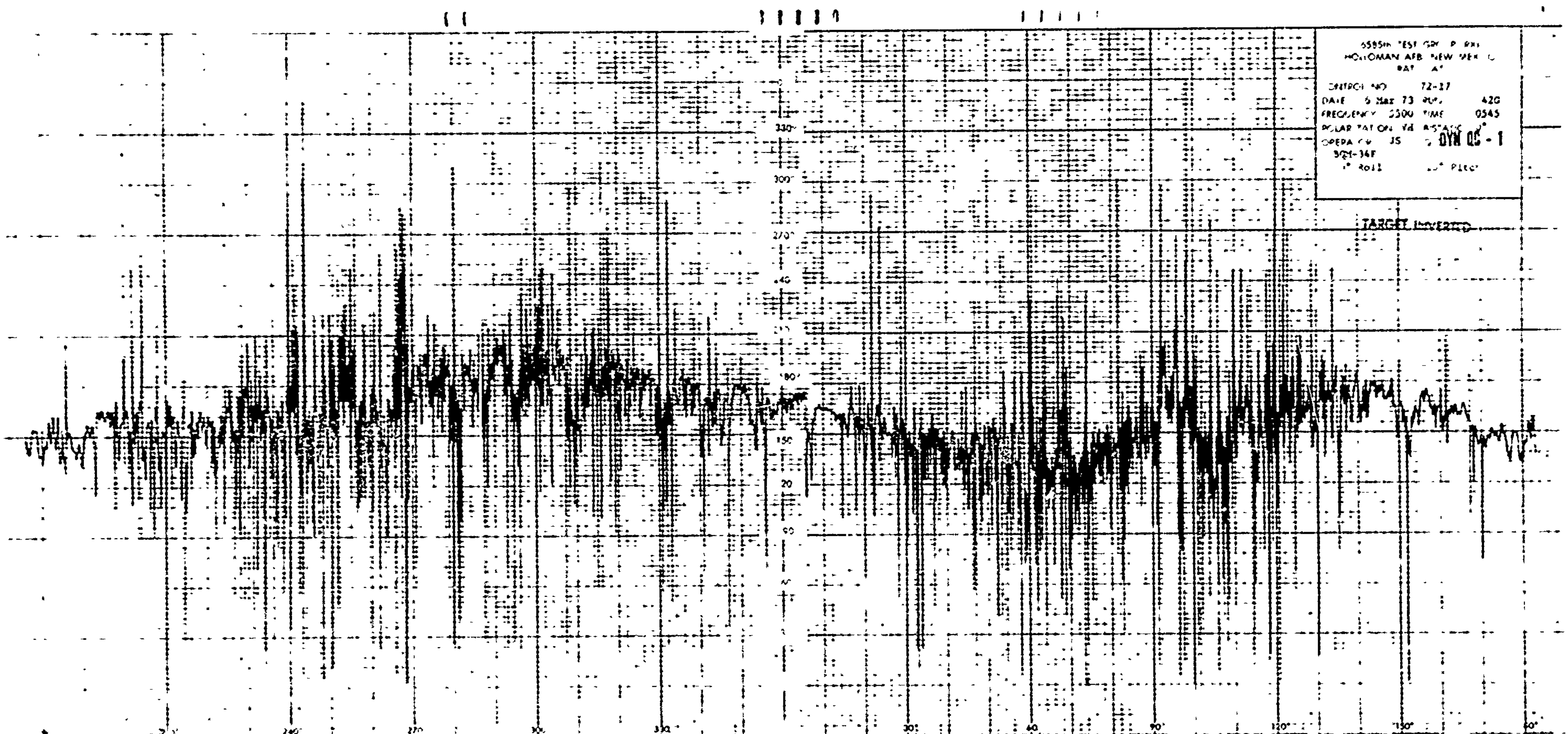

6585th TEST GROUP RX
HOLLOMAN AFB NEW MEX CO
RAT SCAT
CONTROL NO 72-17
DATE 6 Mar 73 RUN HUA
FREQUENCY 5500 TIME 1650
POLARIZATION HH
OPERATOR JS
5085-34E
0° Roll
40° Pitch
TARGET INVERTED
40
30
20
10
0
-10
-20
-30
90°
120°
150°
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

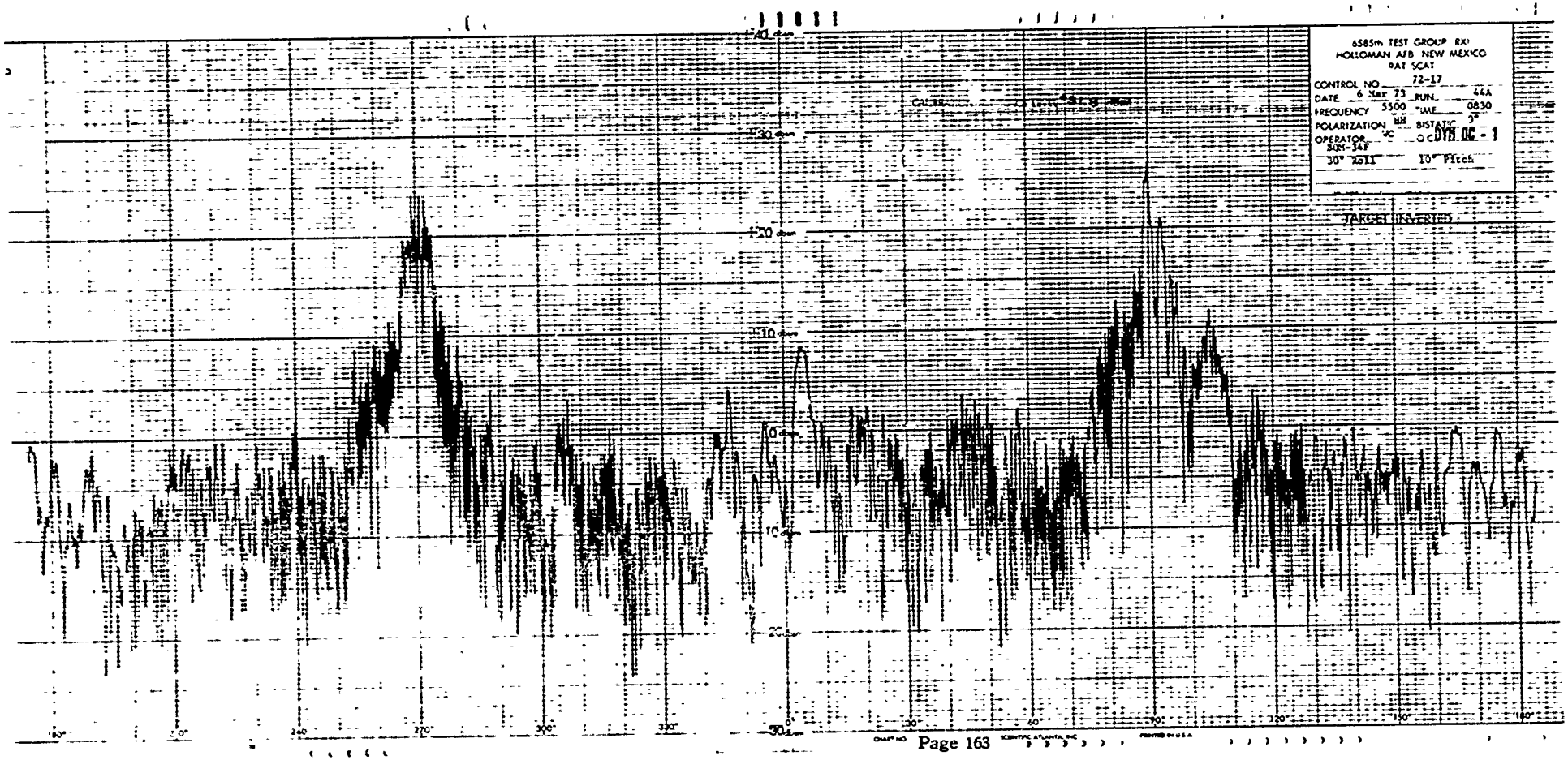

TARGET INVERTED

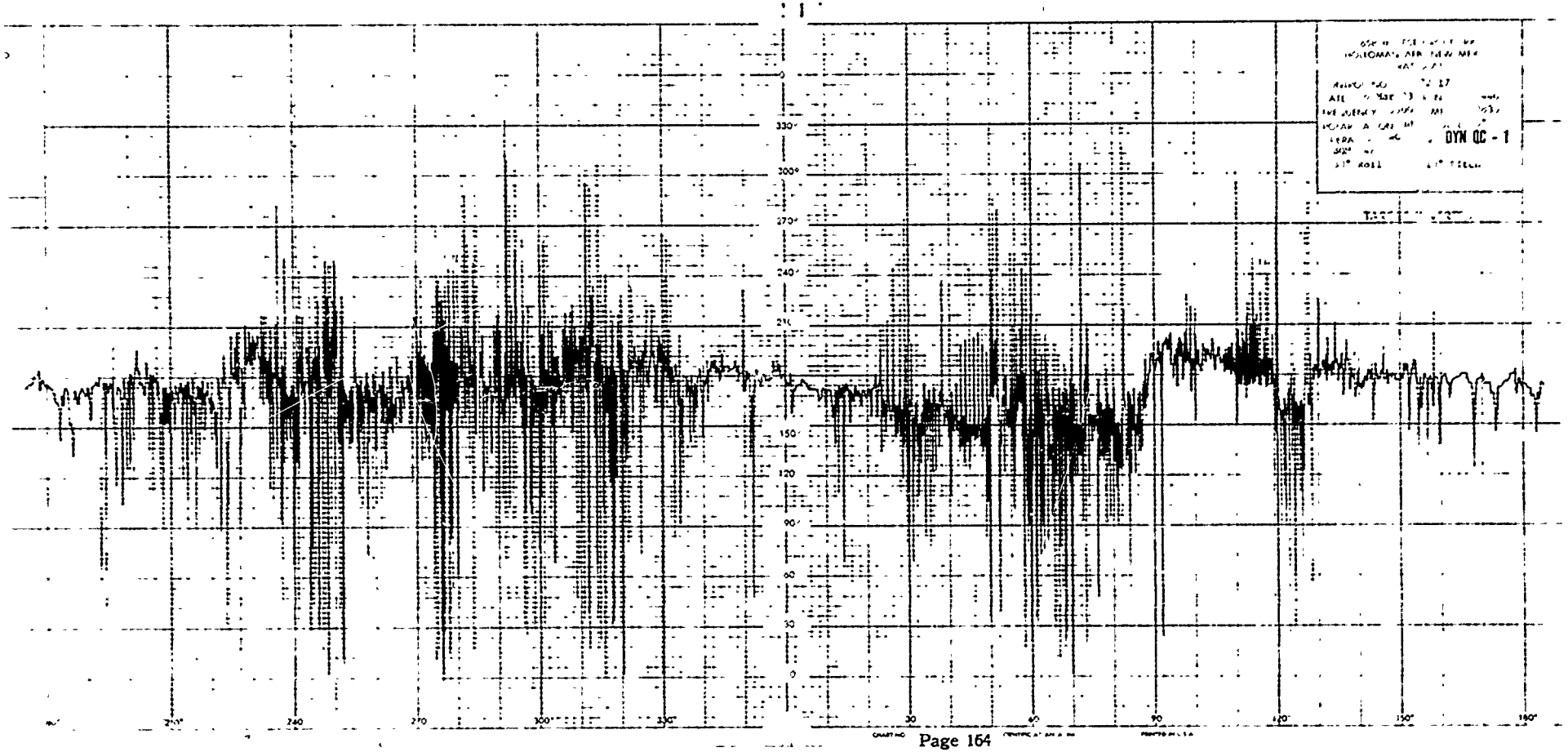

6585th TEST GROUP (X
HOLLOMAN AFB NEW MEXICO
2A" /CAT
CONTROL NO 74-17
DATE 2 Mar 73 RUN 34A
FREQUENCY 5500 TIME 2005
POLARIZATION VV BISTATIC 0°
OPERATOR JS
BOYS-54F
3° Roll 10° Pitch
GYM QC - 1
TARGET INVERTED
40 dBsm
30 dBsm
20 dBsm
10 dBsm
0 dBsm
-10 dBsm
-20 dBsm
-30 dBsm
90°
120°
150°
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

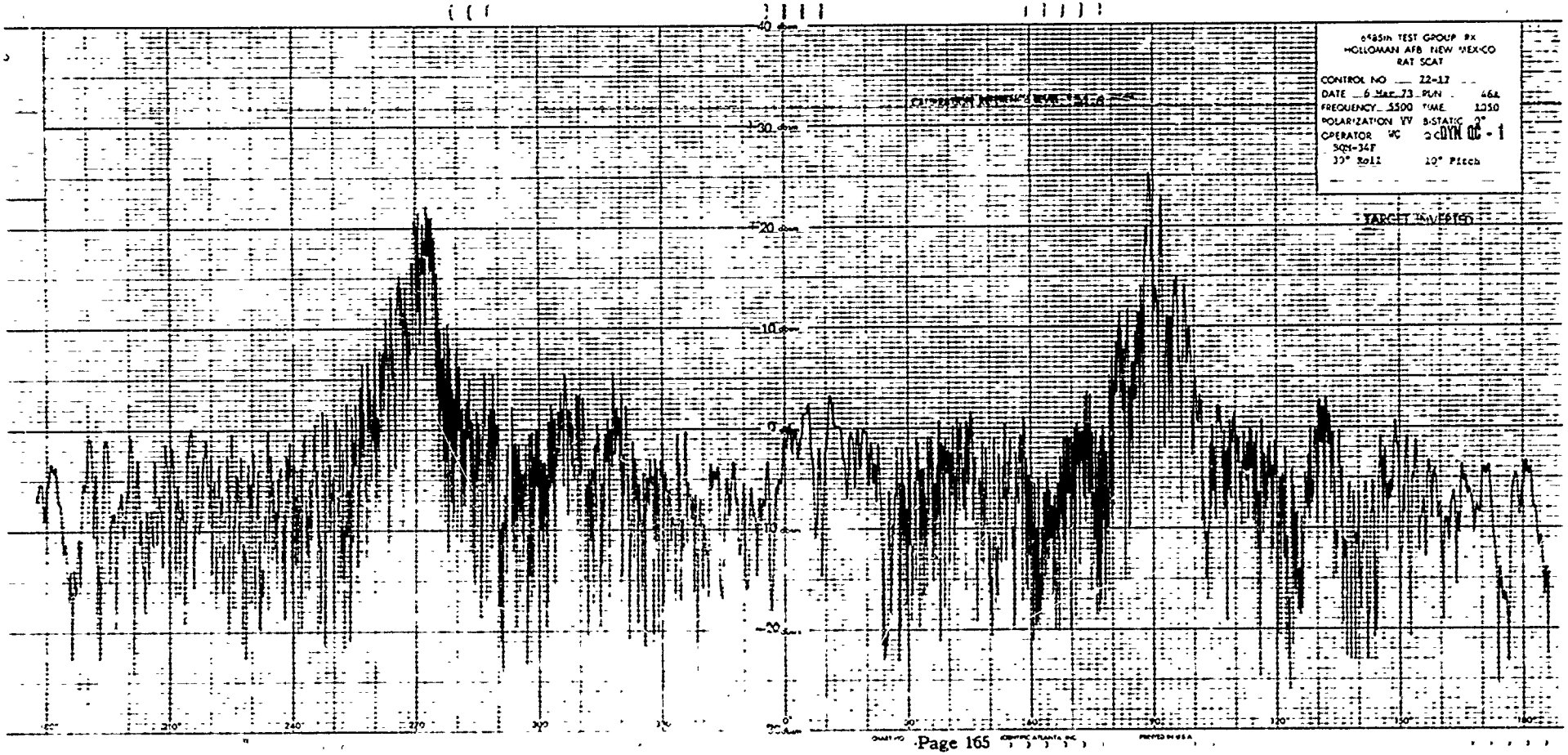

HOLLOMAN AFB NEW MEXICO
CONTROL NO 22-12
DATE 2 Mar 73
FREQUENCY 5500
POLARIZATION VV
BISTAT 0°
OPERATOR JS
BQM-34F
0° Roll
Pitch
TARGET INVERTED

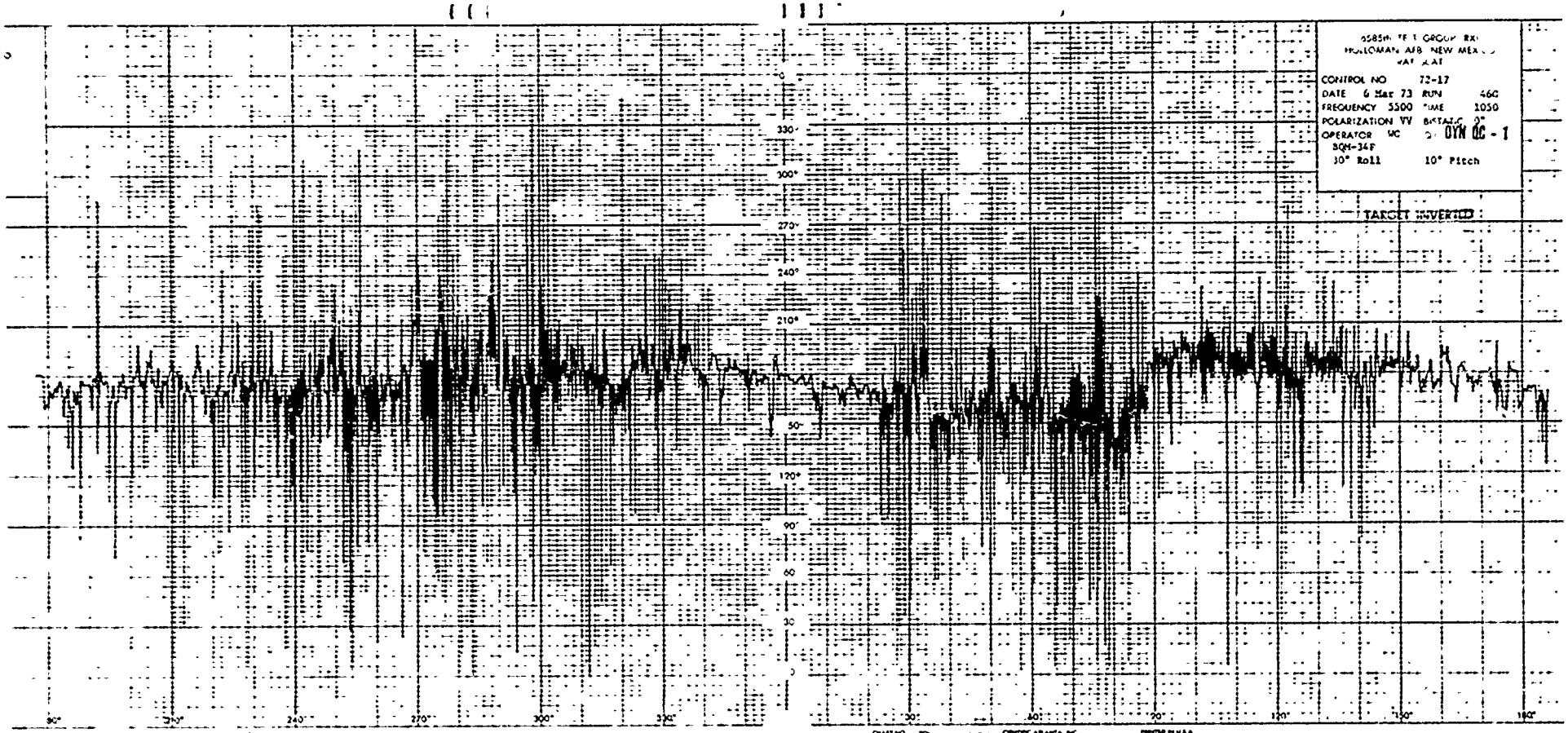

6585th TEST GROUP RXI
HOLLOMAN AFB NEW MEXICO
PAT SCAT
CONTROL NO 72-12
DATE 9 MAR 73 RUN 42A
FREQUENCY 3500 TIME 0545
POLARIZATION VH BISTATIC 0°
OPERATOR JS
° Roll 10° Pitch
TARGET INVERTED
-30 dBsm
-20 dBsm
-10 dBsm
0 dBsm
10 dBsm
20 dBsm
30 dBsm
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

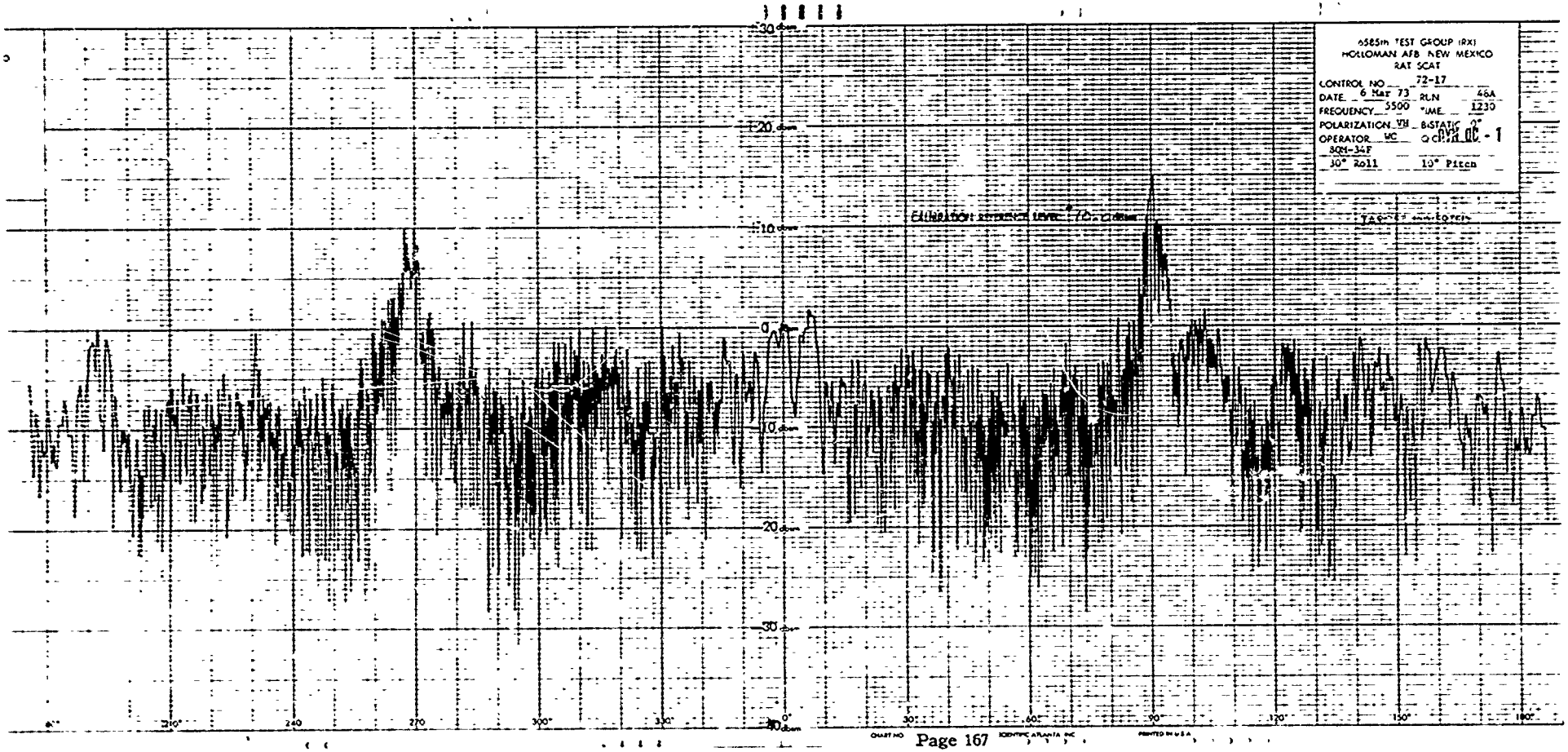

HOLLOMAN AFB NEW MEXICO
CONTROL NO 72-17
DATE 5 Mar 73
42G
TIME 0545
JS
DYN QC - 1
TARGET INVERTED
330°
300°
270°
180°
150°
240°
30°
60°
90°
120°
150°

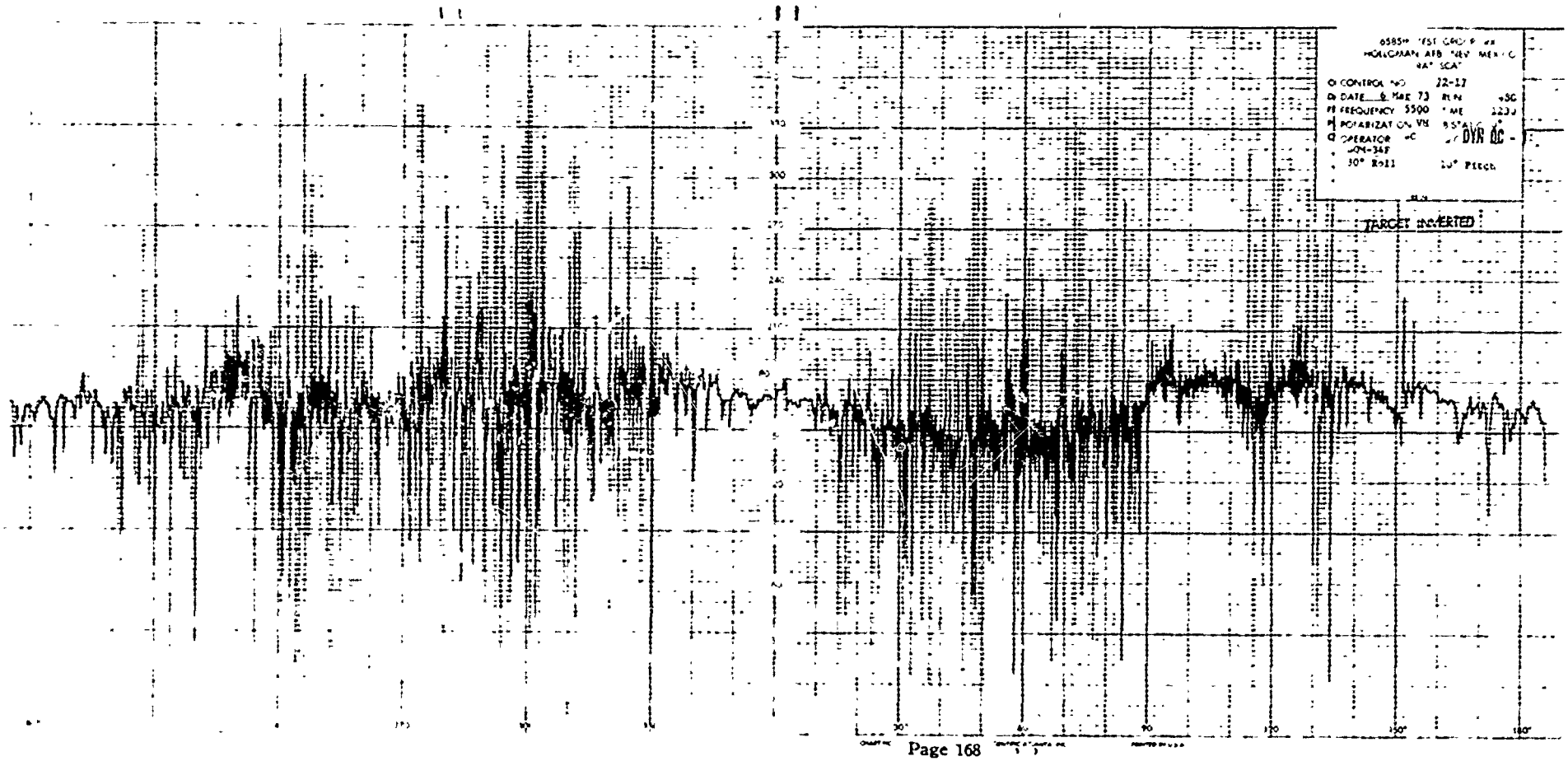

6585m TEST GROUP RX1
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO. 72-17
DATE 6 Mar 73 RUN 44A
FREQUENCY 5500 TIME 0830
POLARIZATION HH BISTATIC 3°
OPERATOR JC
SQM-34F
30" Refl 10" Pitch
DYN RC - 1
TARGET REVERSED
40 dBsm
30 dBsm
20 dBsm
10 dBsm
0 dBsm
-10 dBsm
-20 dBsm
-30 dBsm
CALIBRATION
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°

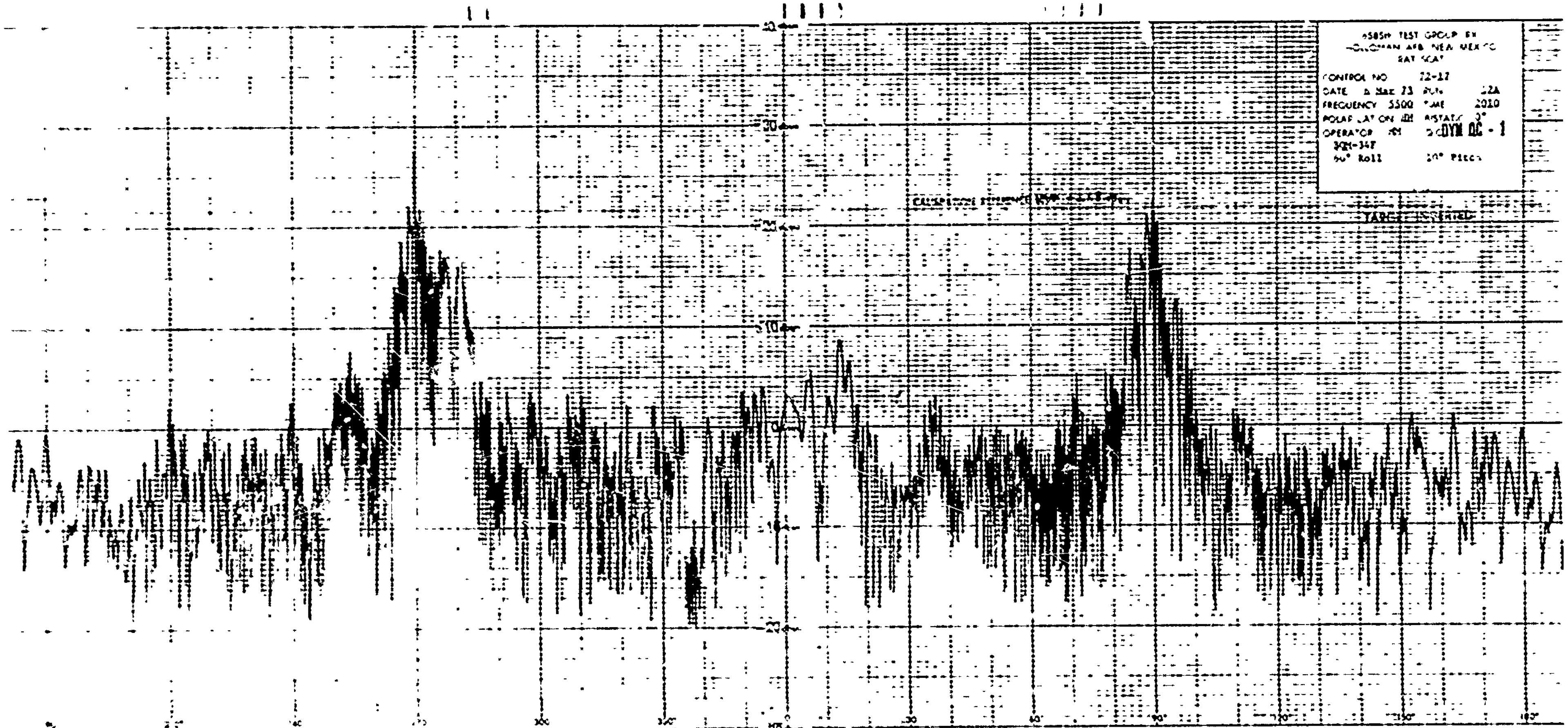

DYN OC - 1

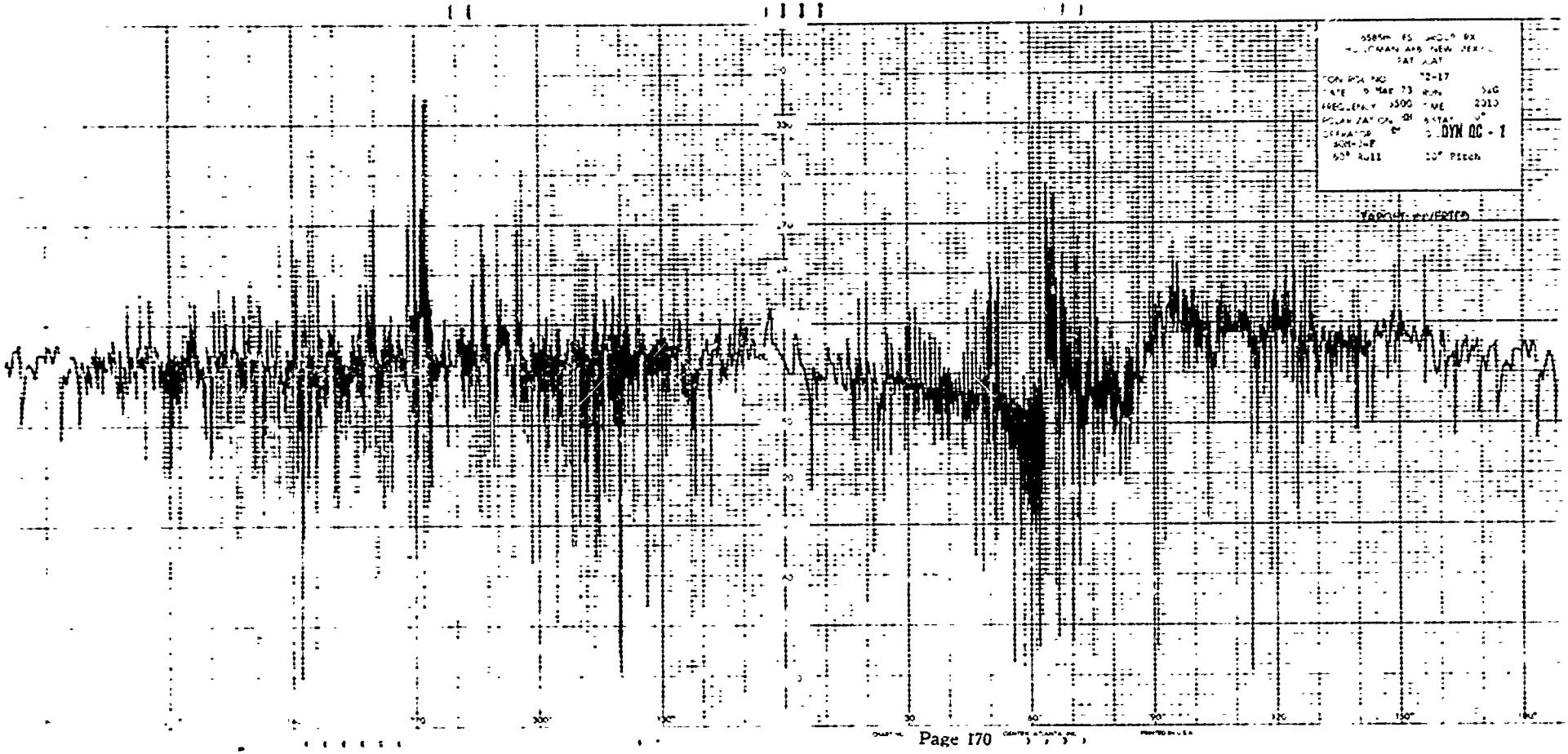

6585th TEST GROUP PX
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 22-17
DATE 6 Mar 73 RUN 46A
FREQUENCY 5500 TIME 1250
POLARIZATION VV BISTATIC 0°
OPERATOR WC
SQN-34F
10° Roll 10° Pitch
TARGET INVERTED
40
30
20
10
0
-10
-20
0°
30°
60°
90°
120°
150°
180°
210°
240°
270°
300°
330°

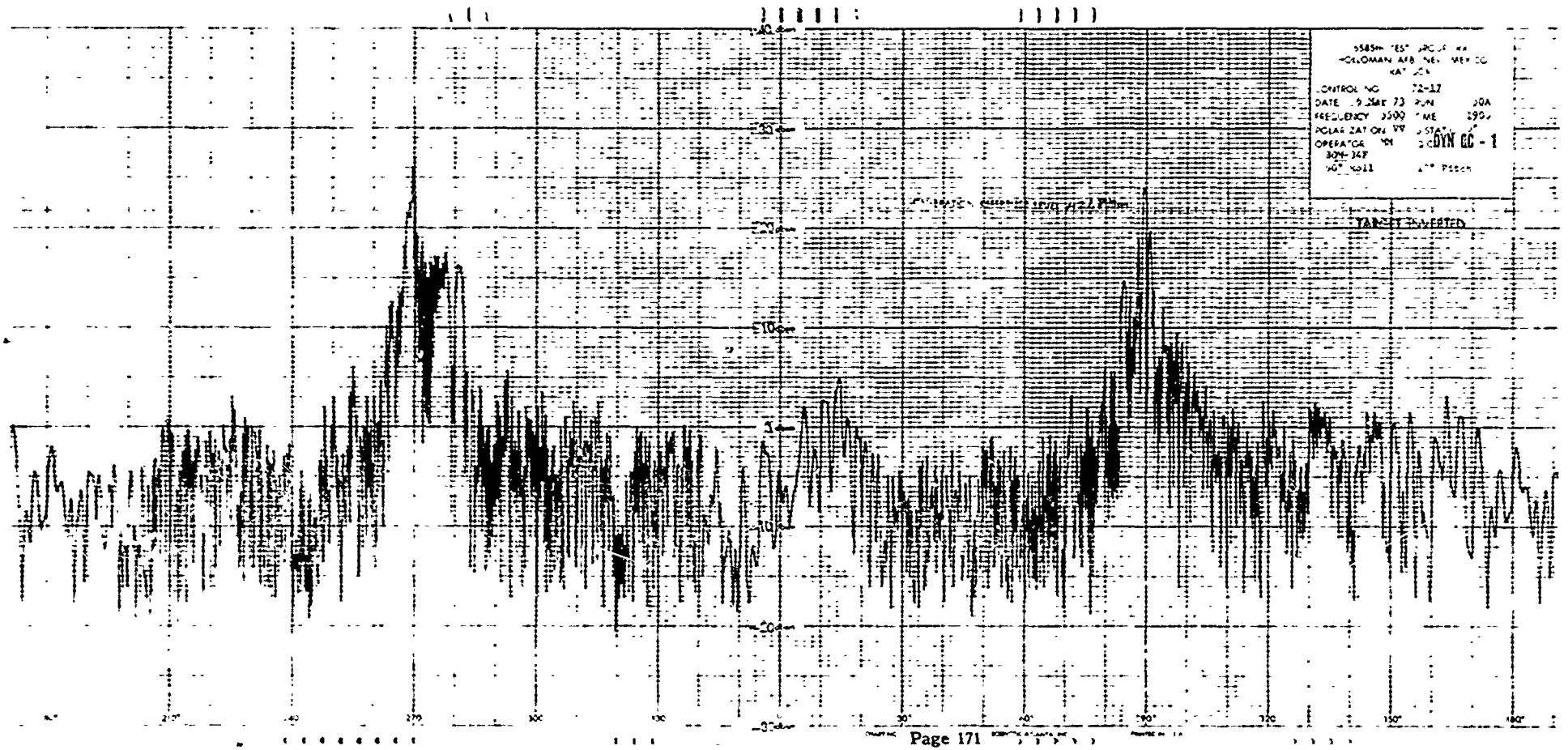

CONTROL NO 72-17
DATE 6 Mar 73 RUN 460
FREQUENCY 5500 TIME 1050
POLARIZATION VV
OPERATOR WC
SQH-34F
30° Roll 10° Pitch
TARGET INVERTED
OYN QC - 1
330°
300°
270°
240°
210°
50°
120°
90°
60°
30°
0
90°
240°
270°
300°
330°
30°
60°
90°
120°
150°
180°

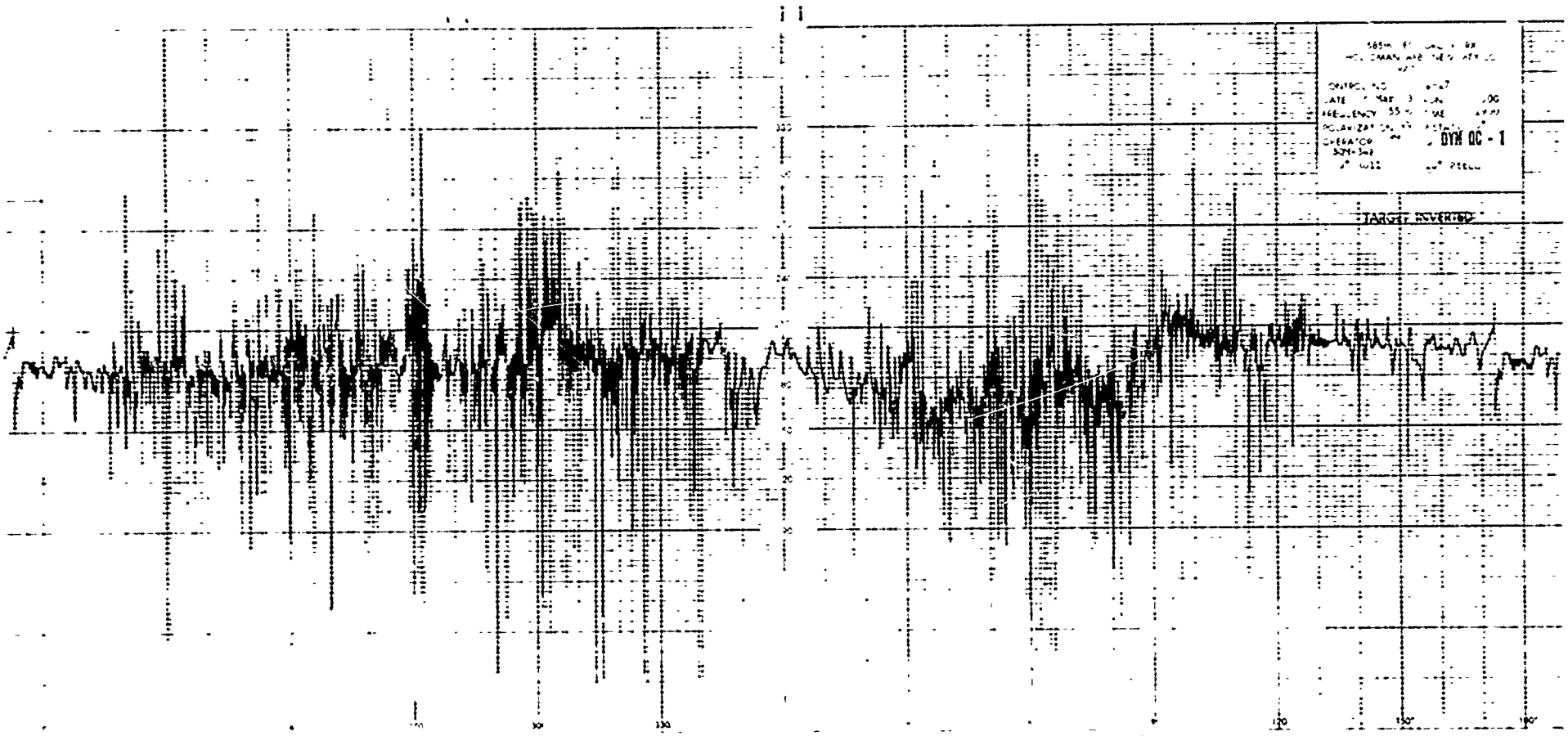

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 6 Mar 73 RUN 46A
FREQUENCY 5500 TIME 1230
POLARIZATION VH BISTATIC 0°
OPERATOR MC
SQM-34F
30° Roll 10° Pitch
-30 dbsm
-20 dbsm
-10 dbsm
0 dbsm
10 dbsm
20 dbsm
30 dbsm
210°
240
270
300°
330°
0°
30°
60°
90
120°
150°
180°

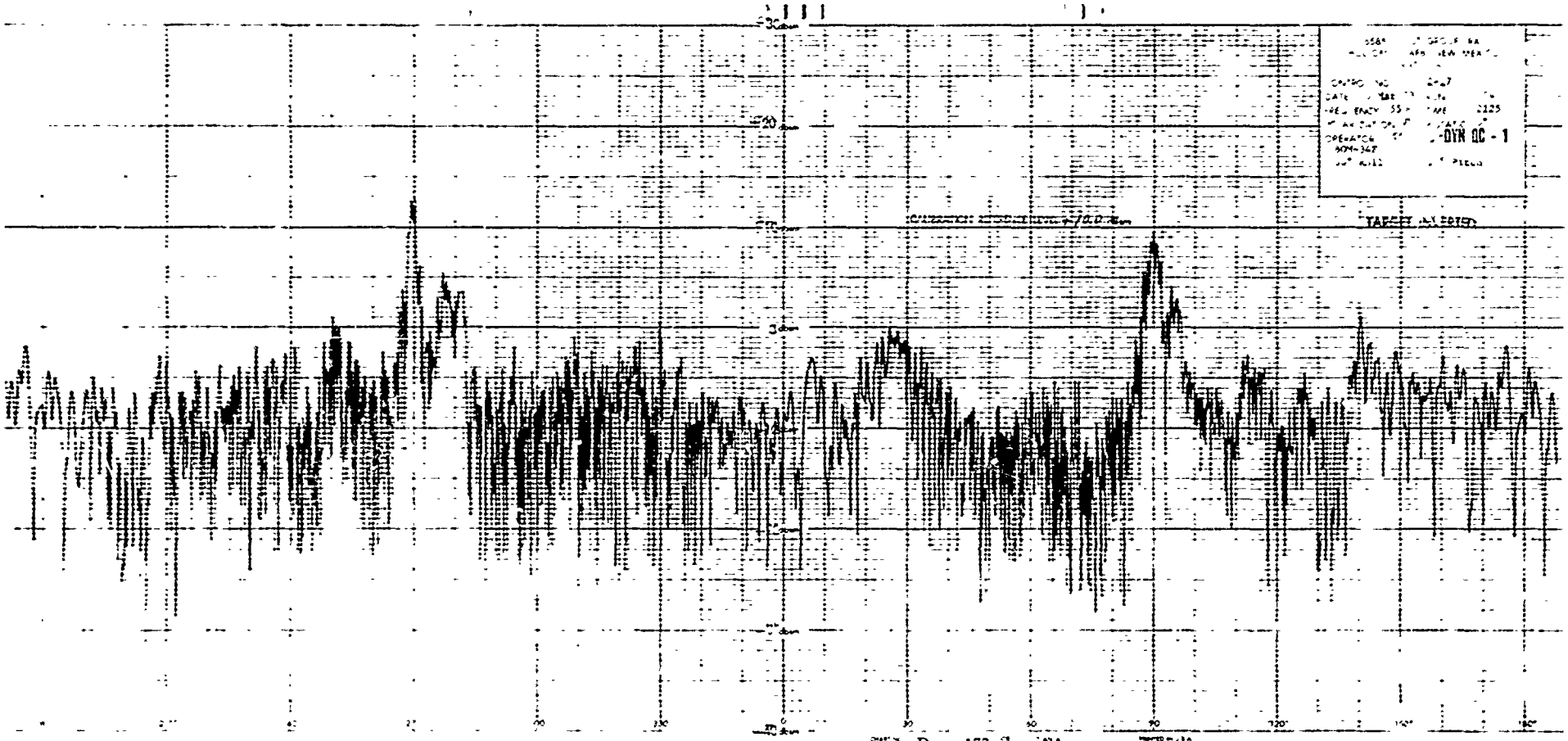

6585th TEST GROUP
HOLLOMAN AFB NEW MEXICO
RUN
DVR dc -
TARGET INVERTED

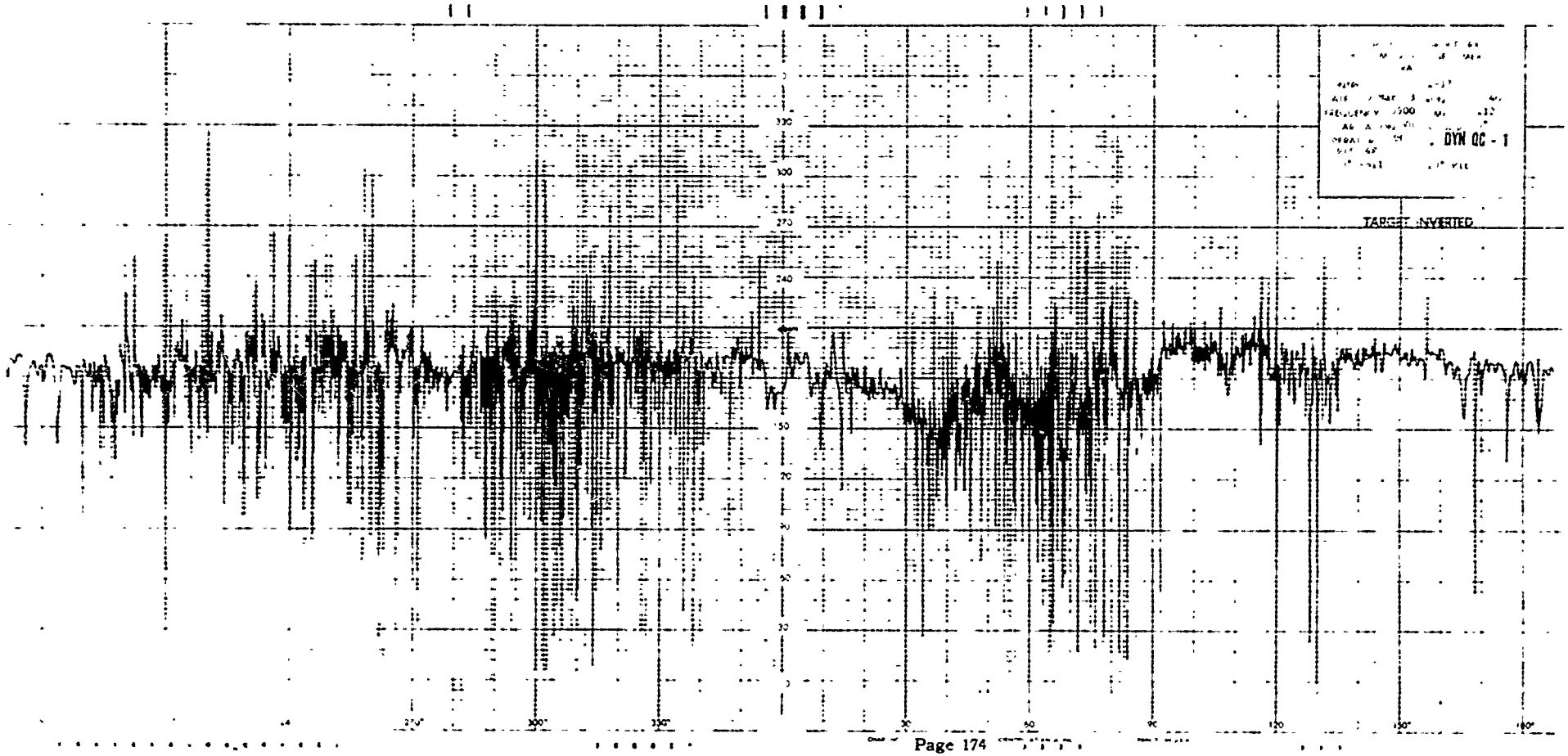

6585th TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 6 Mar 73 RUN 22A
FREQUENCY 5500 TIME 2010
OPERATOR
DYN DC - 1
60° Roll
20° Pitch
TARGET INVERTED

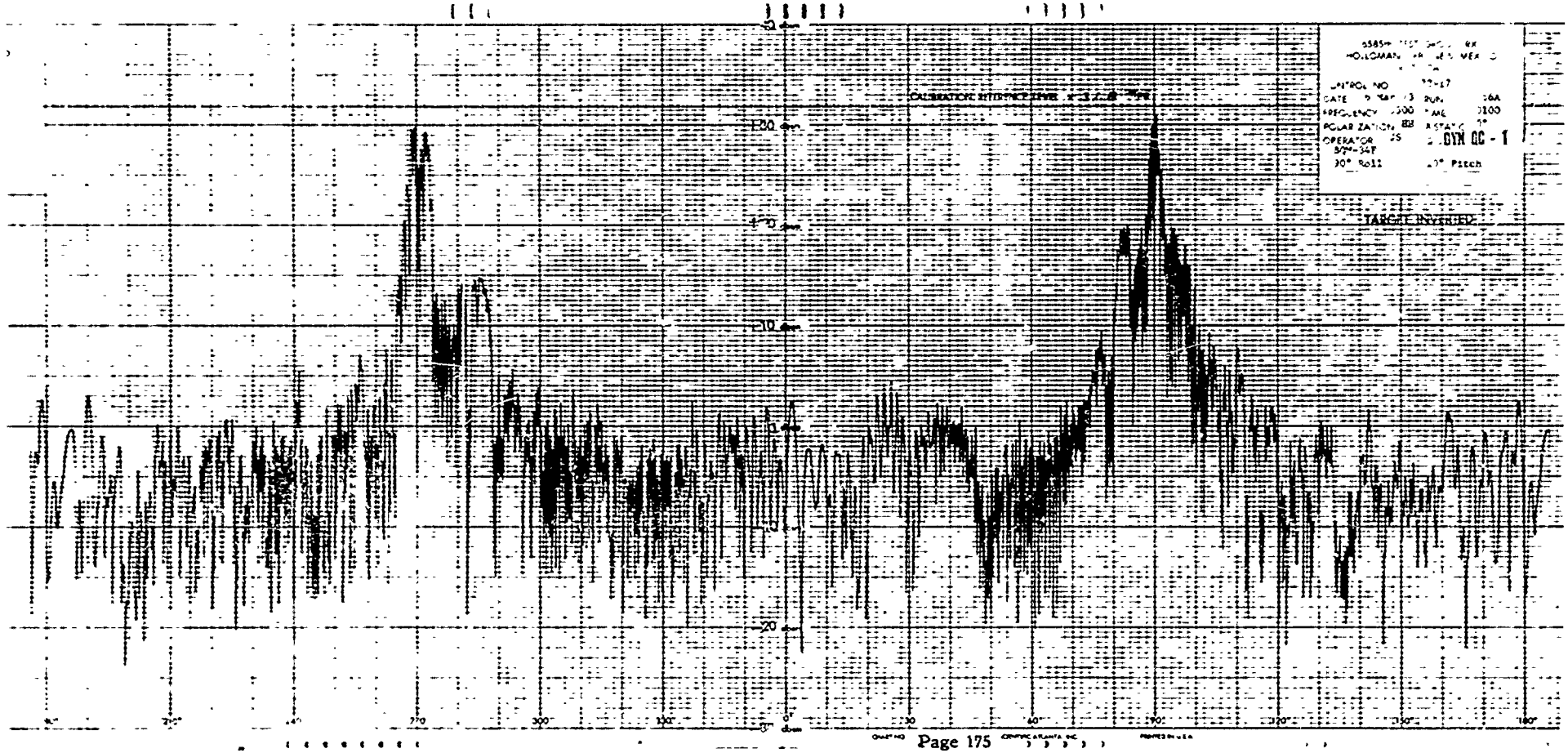

DYN QC - 1
60° Roll
10° Pitch

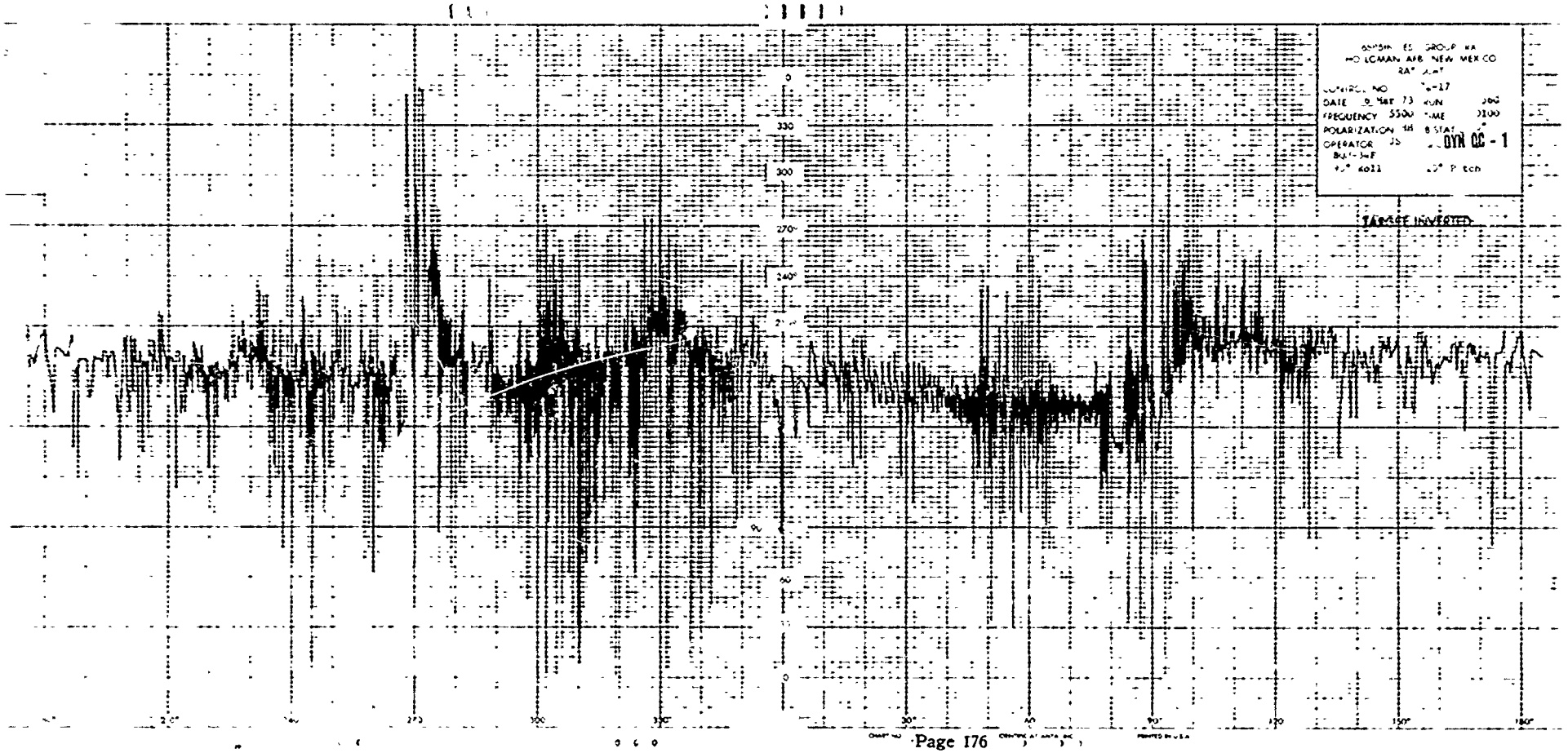

CONTROL NO 72-12
DATE 19 Mar 73 RUN 10A
FREQUENCY 3500 TIME 2900
OPERATOR YH
DYN RC - 1
TARGET INVERTED
40
30
20
10
0
-10
-20
-30

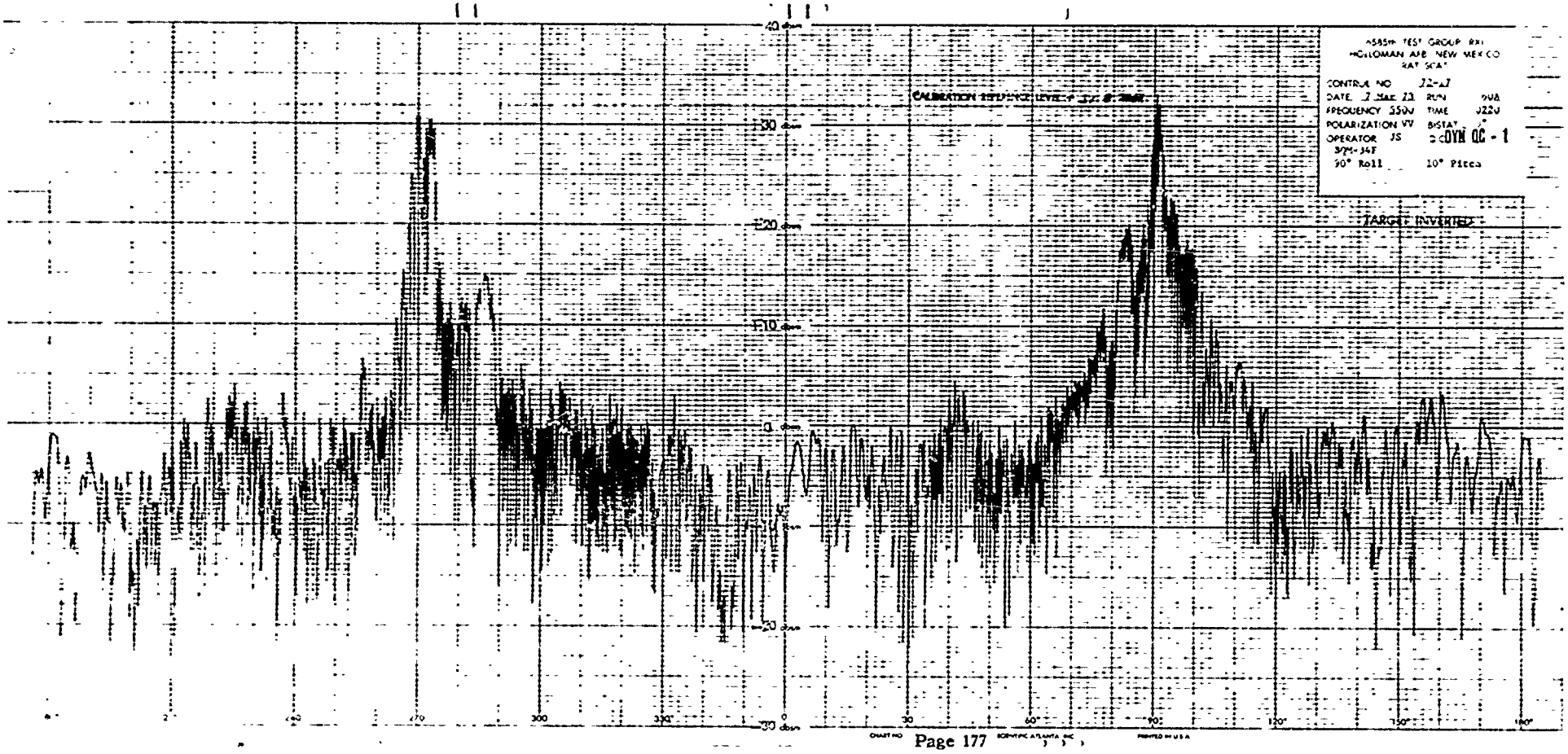

DYN QC - 1
TARGET REVERSED

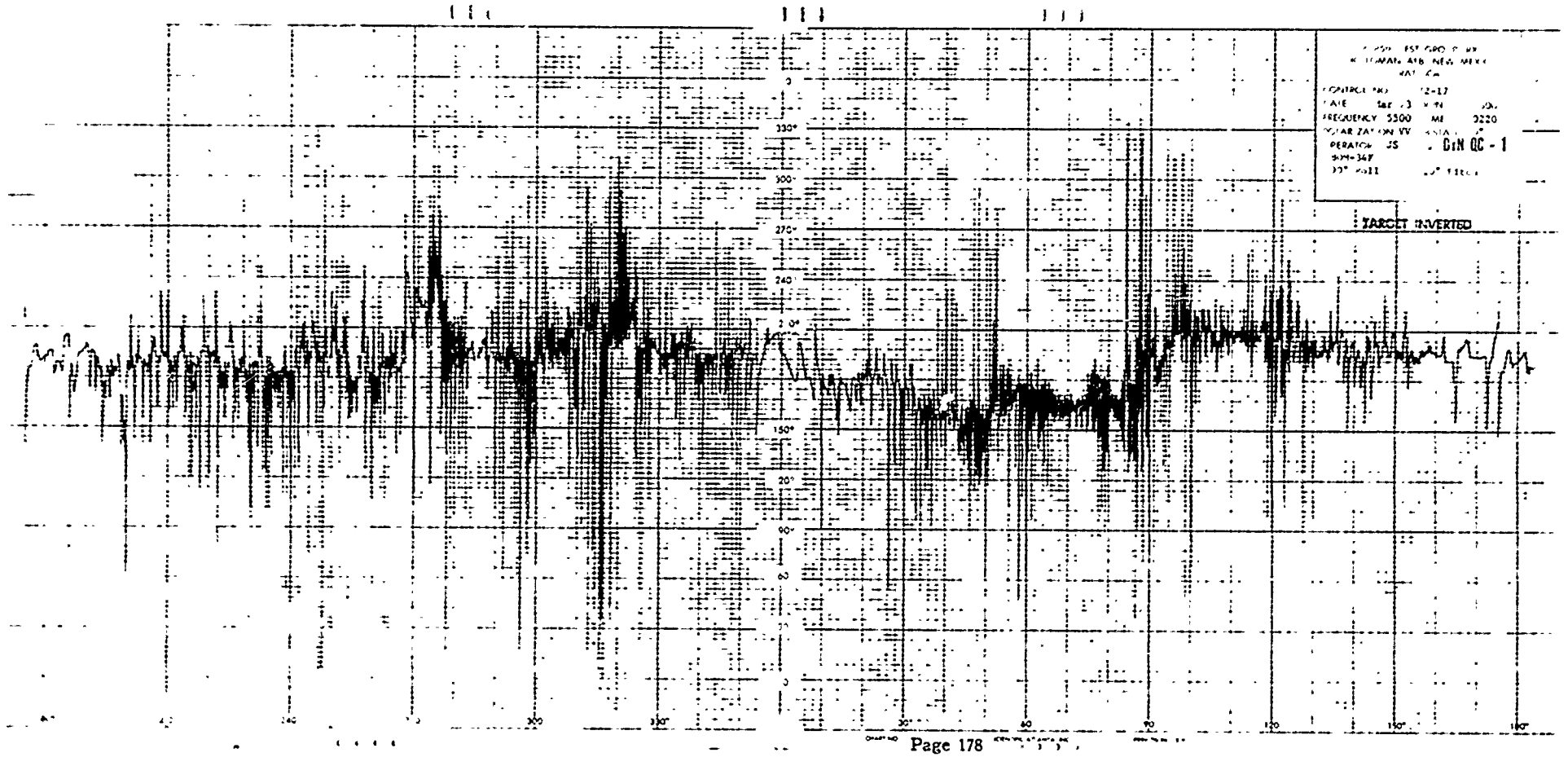

-DYN QC - 1

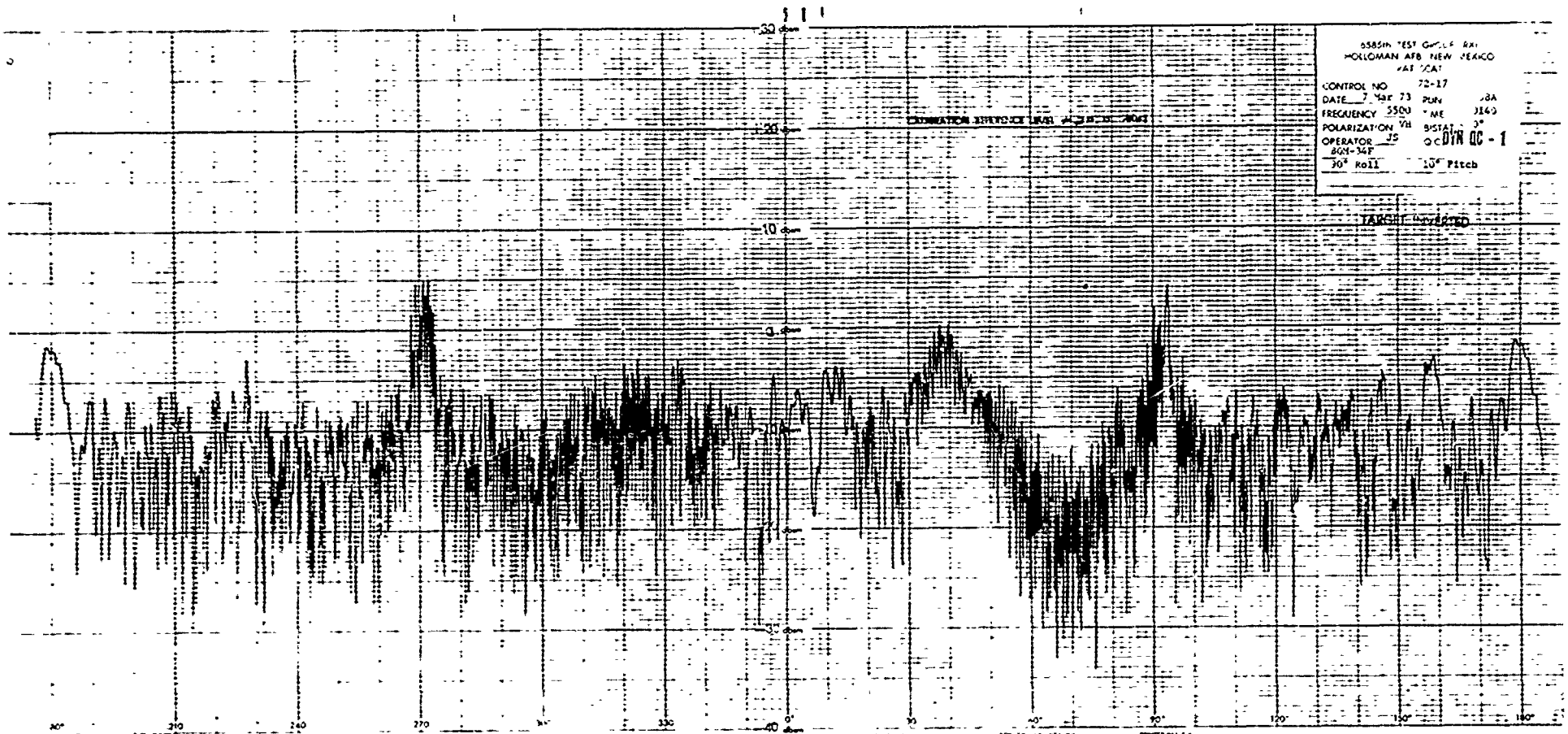

DYN QC - 1
TARGET INVERTED

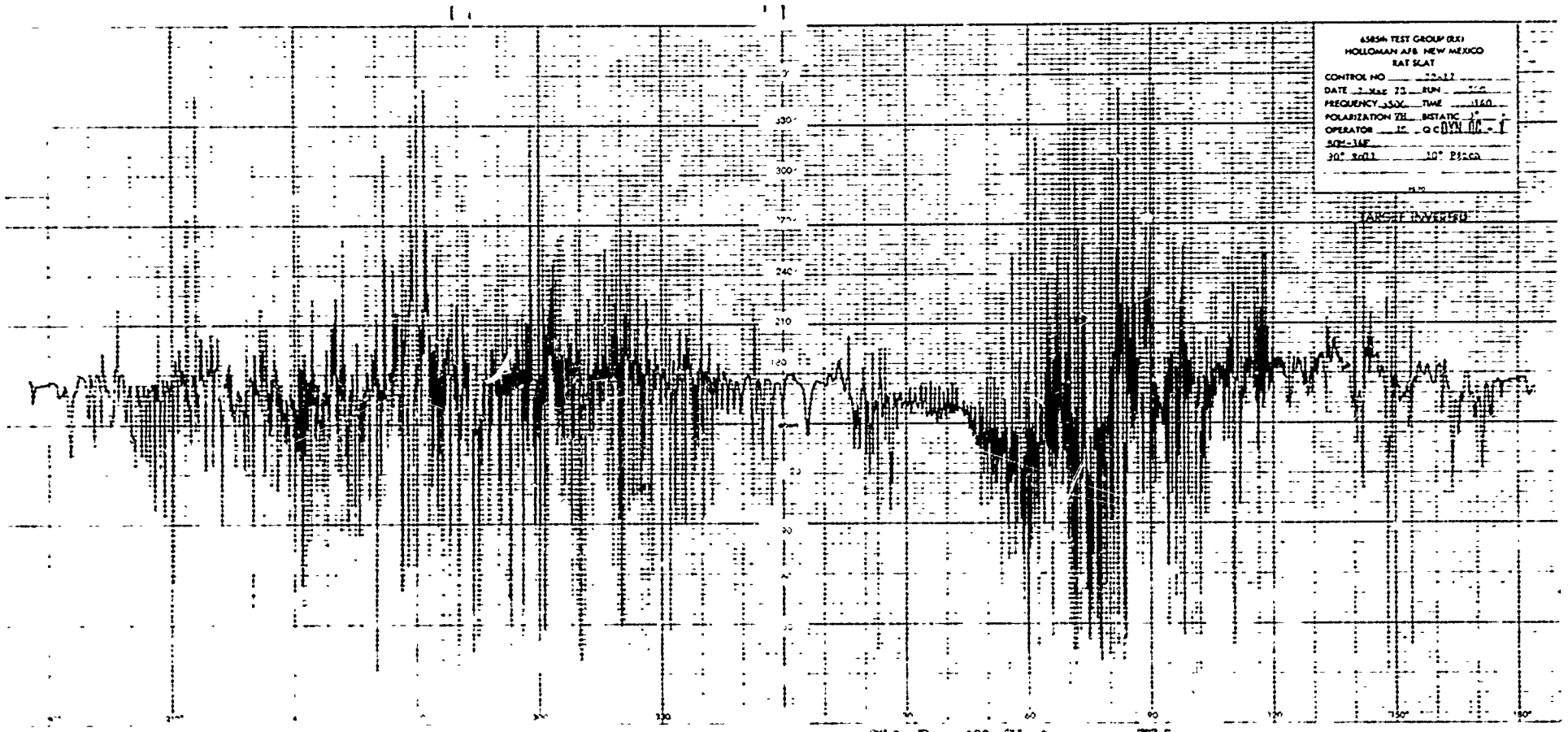

TARGET INVERTED
GYM GC - 1
-10 dbsm
-20 dbsm
0°
30
60°
90°
120°
150°
180°
210°
240°
270°
300°
330°

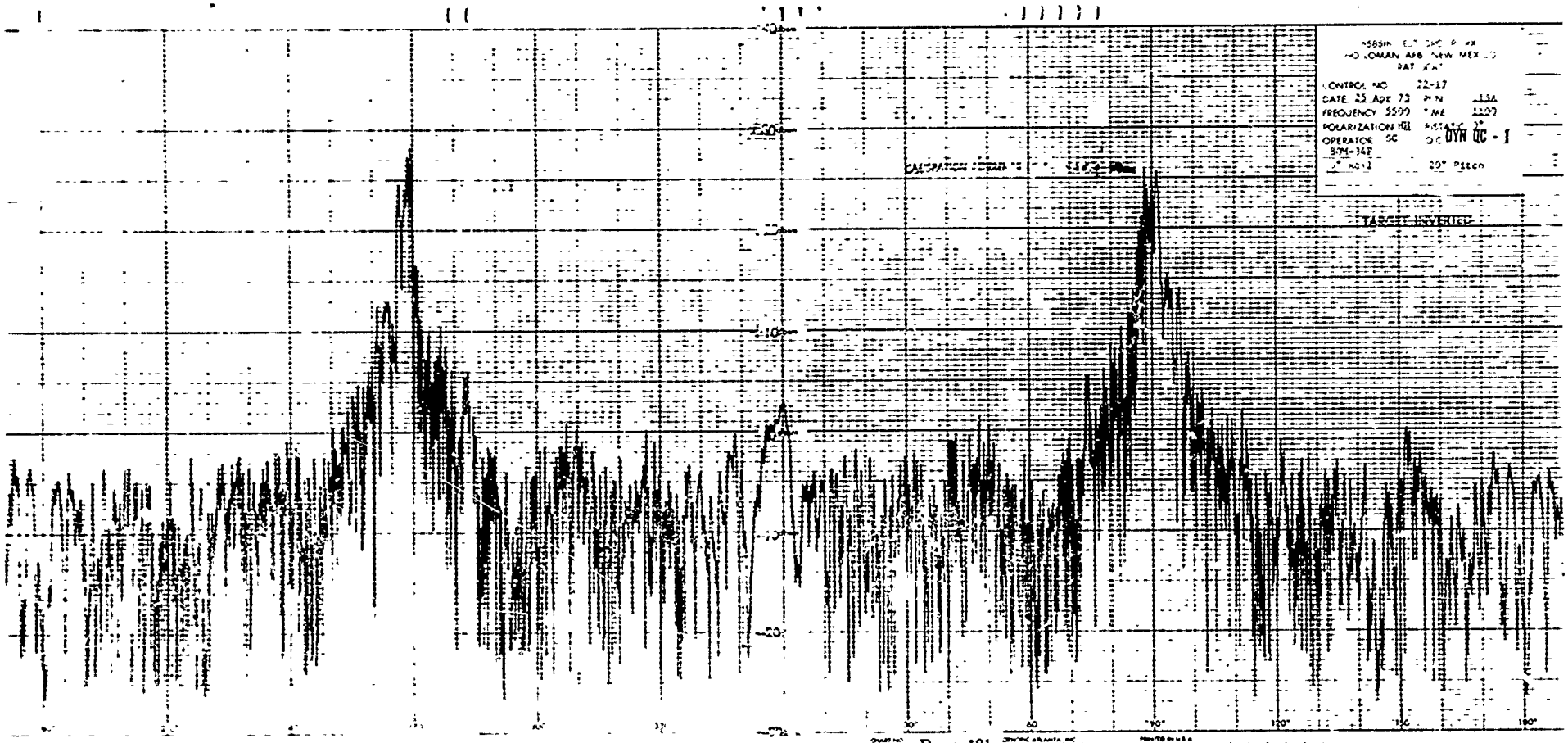

330
300
270
240
TARGET INVERTED
DYN QC - 1

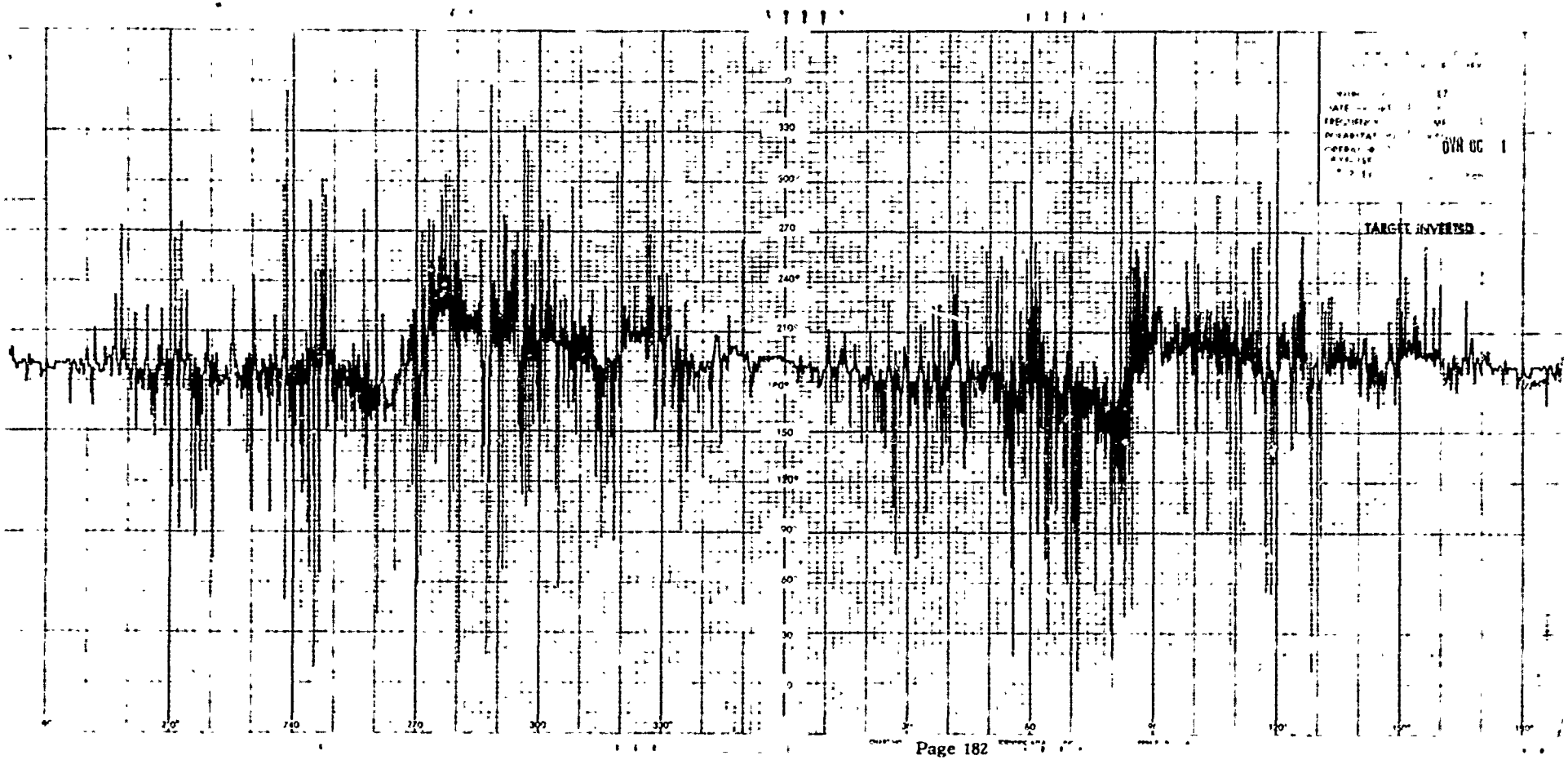

4585th TEST GROUP (RTI)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 32-47
DATE 7 MAR 73 RUN 90B
FREQUENCY 550U TIME 1220
POLARIZATION VV BISTAT 0°
OPERATOR JS
3795-36F
90° Roll 10° Piece
DYN QC - 1
TARGET INVERTED
CALIBRATION REFERENCE LEVEL
40 dBsm
30 dBsm
20 dBsm
10 dBsm
0 dBsm
-10 dBsm
-20 dBsm
-30 dBsm
270
300
330
0
30
60°
90°
120°
150°
180°

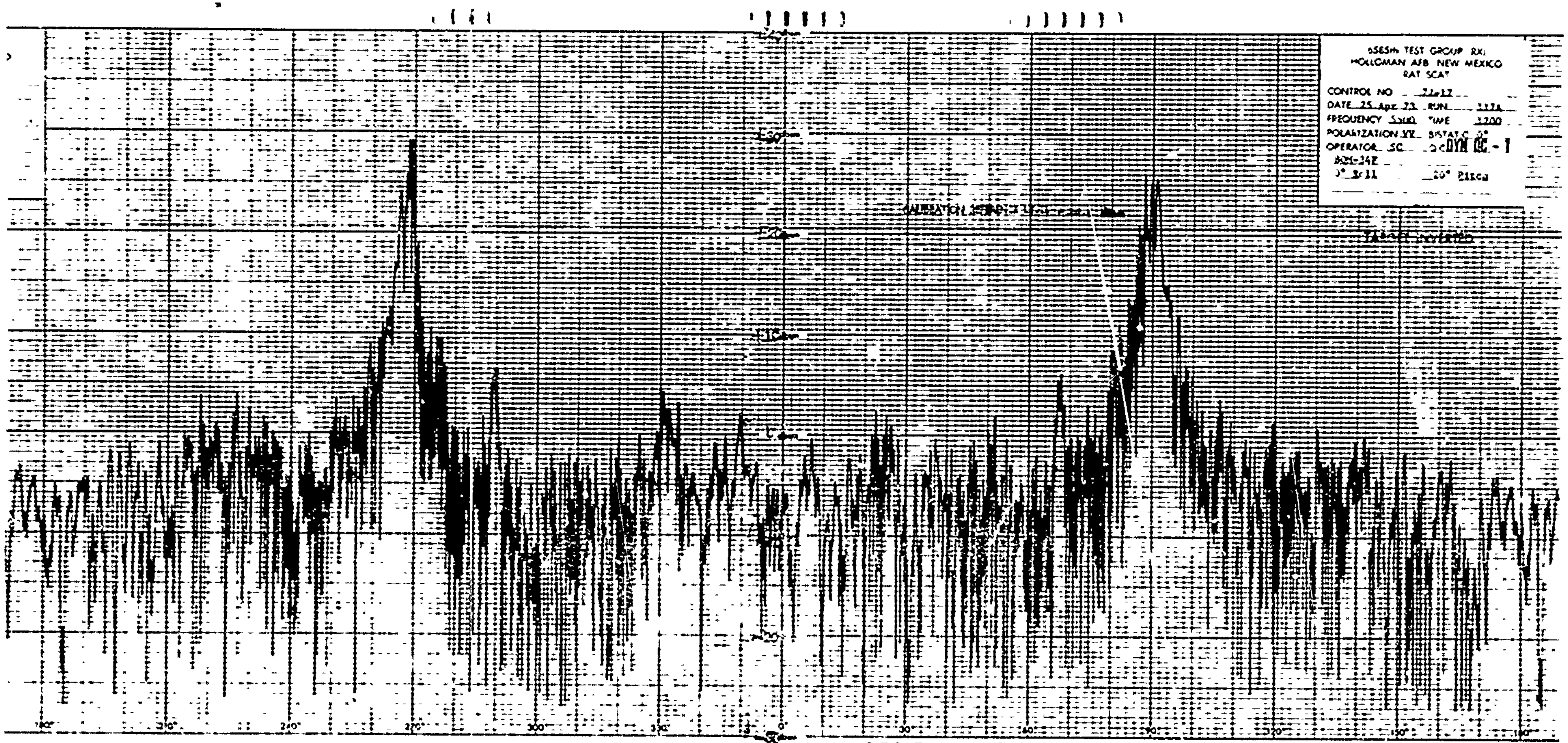

FREQUENCY 5500 MI 9220
GIN QC - 1
TARGET INVERTED

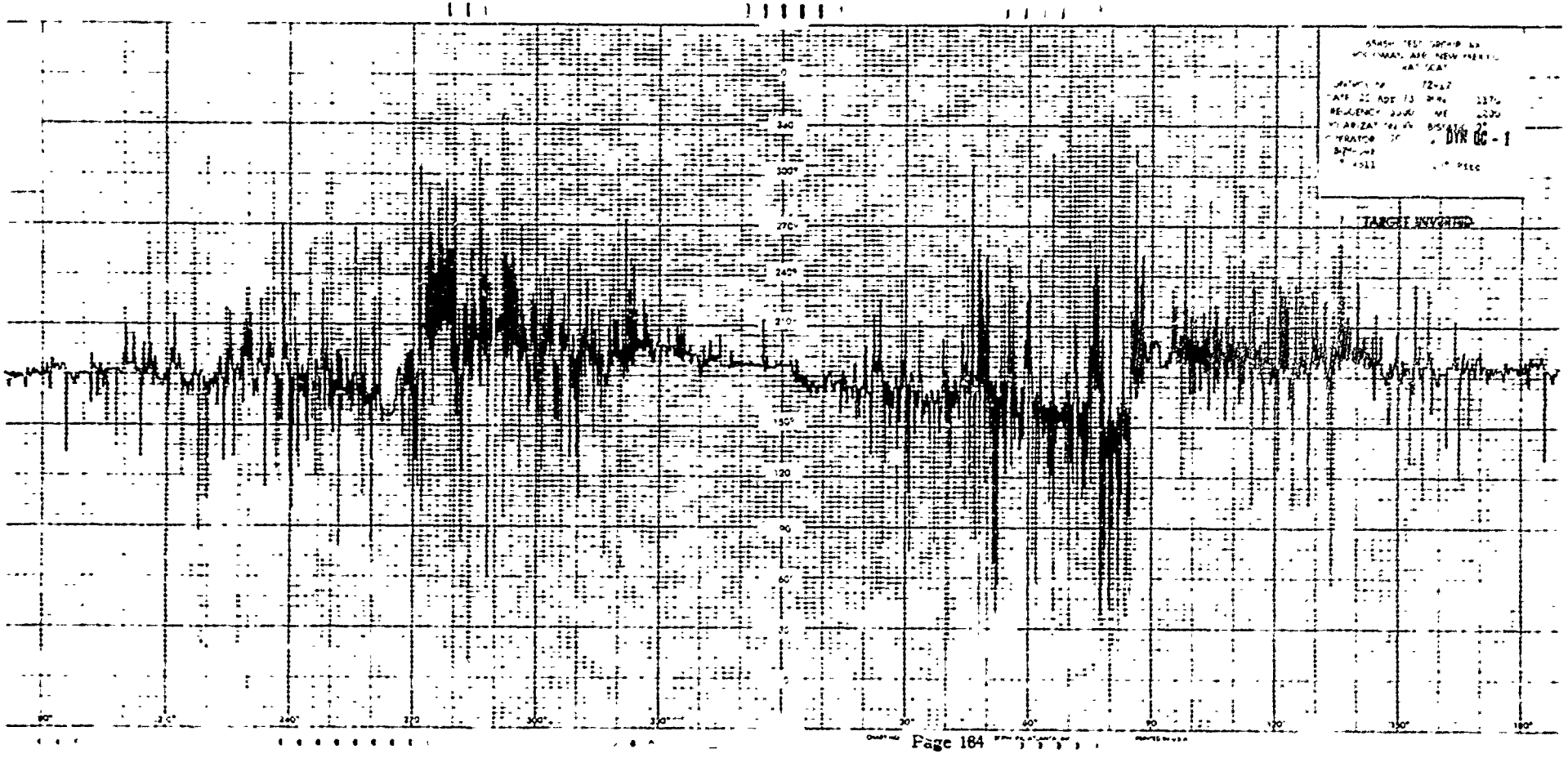

6585th TEST GROUP RAI
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 7 Mar 73 RUN 38A
FREQUENCY 5500 TIME 1140
POLARIZATION VH BISTAT 3°
OPERATOR JS QC DYN QC - 1
80M-34P
30° Roll 10° Pitch
TARGET ROTATED
-30 dbsm
-20
-10 dbsm
0
-10 dbsm
-20
-30 dbsm
-40 dbsm
210
240
270
300
330
0°
30
60°
90°
120°
150°
180°

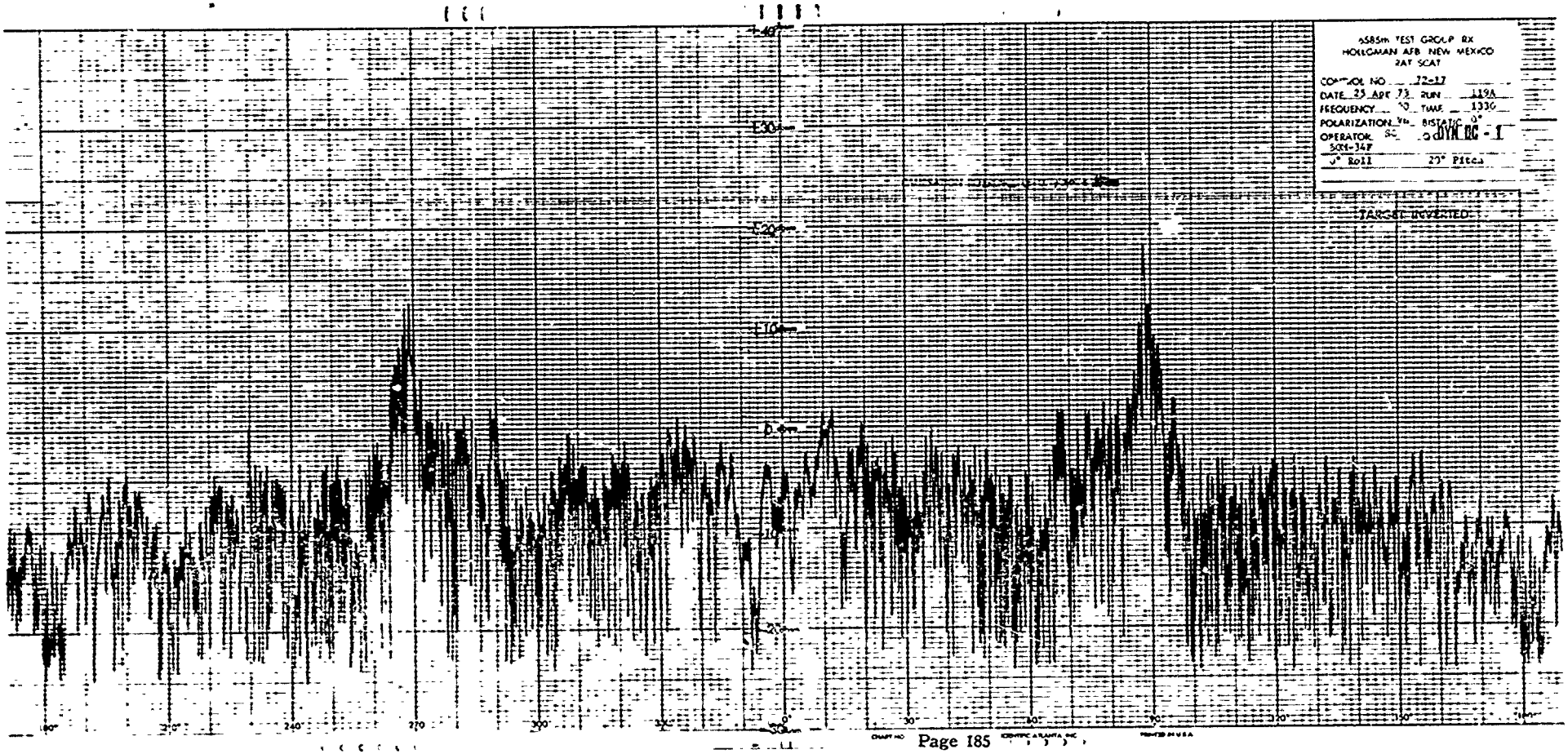

6585th TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO
DATE 2 MAR 73 RUN
FREQUENCY 450 TIME 1140
POLARIZATION VH BISTATIC
OPERATOR IC QC
SCM-14F
30° ROLL 30° PITCH
TARGET INVERTED

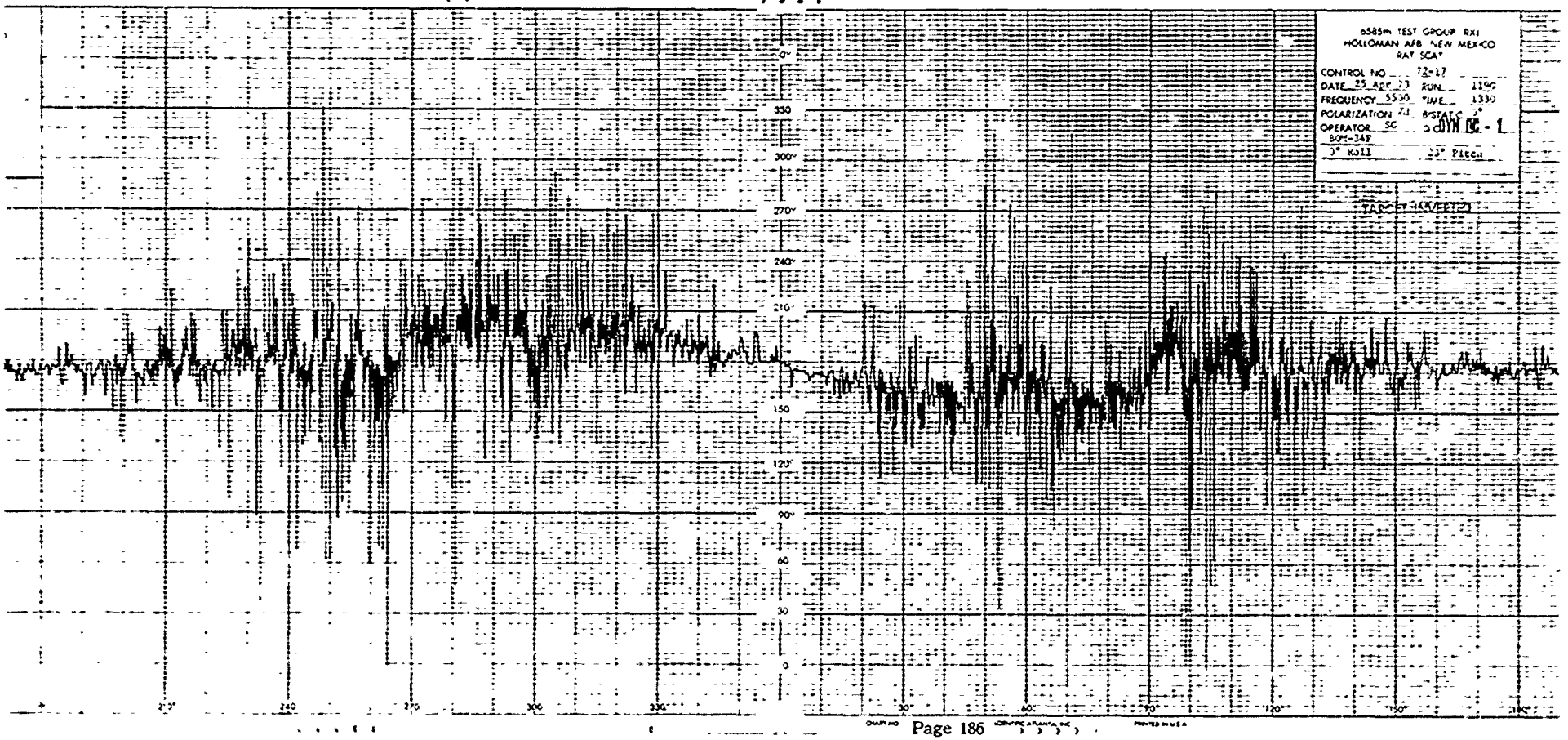

CONTROL NO 22-27
DATE 23 APR 73
FREQUENCY 5599
POLARIZATION HH
OPERATOR SC
DYN QC - 1
TARGET INVERTED

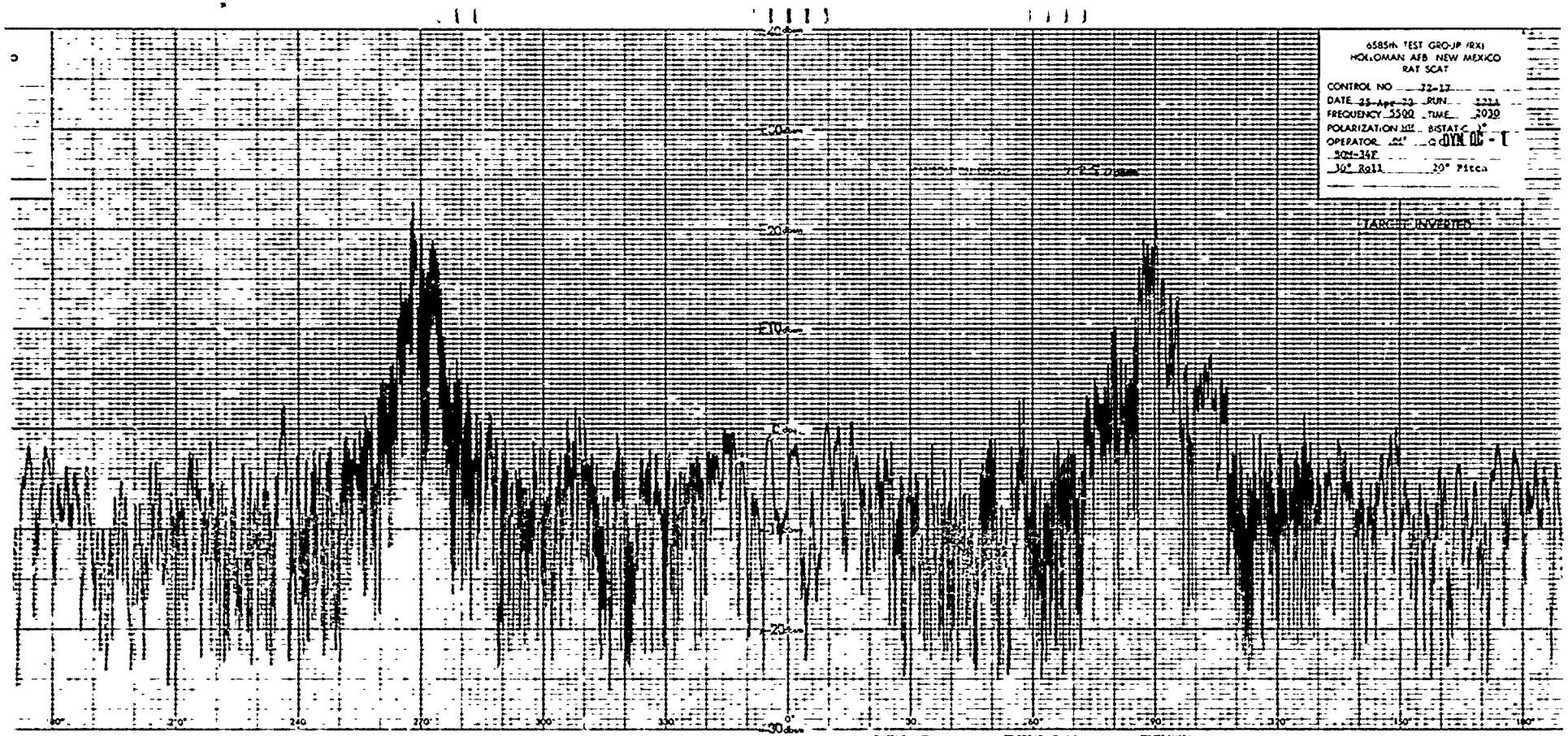

TARGET INVERTED

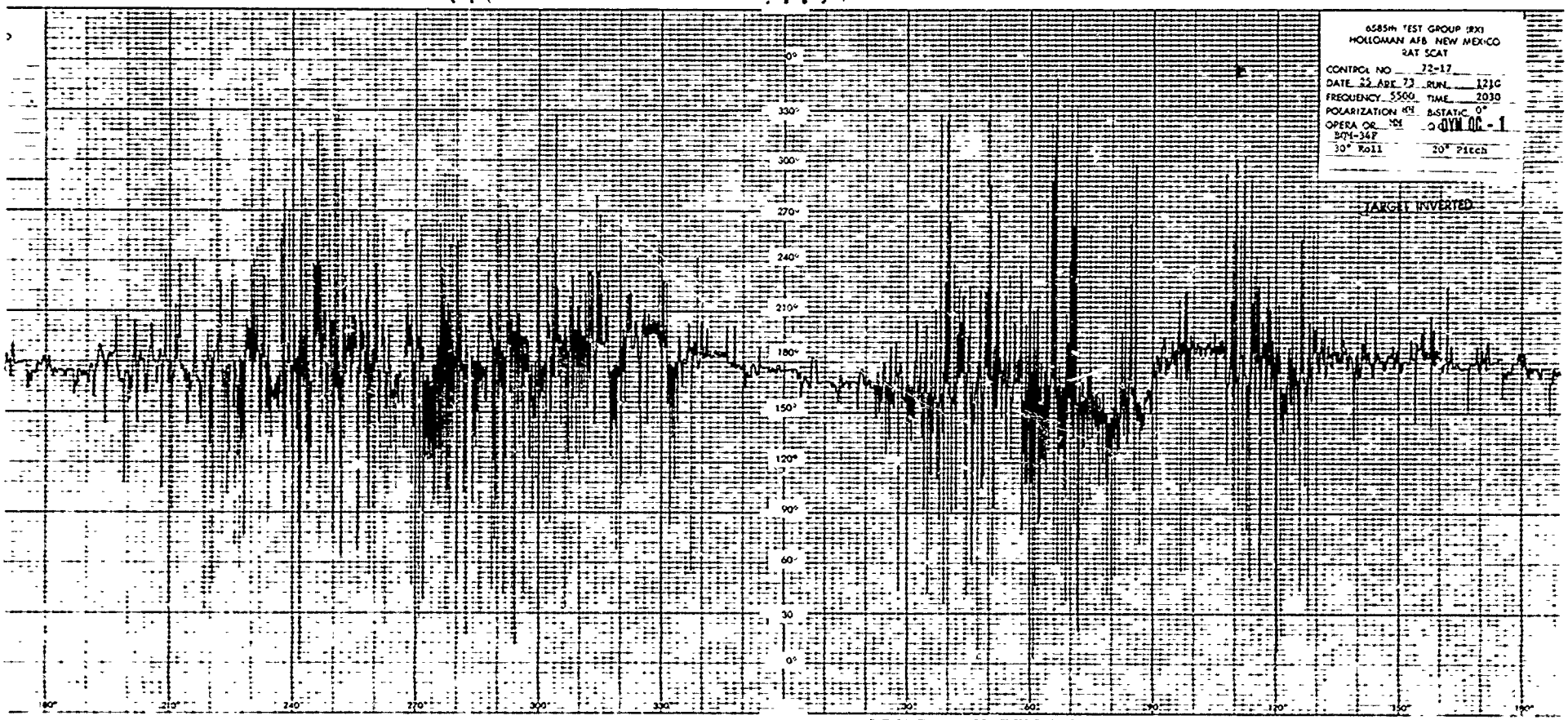

6585th TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO
DATE 25 Apr 73 RUN
FREQUENCY
POLARIZATION VV BISTATIC 0°
OPERATOR SC
DYN CC - 1
20° Pitch
TARGET INVERTED
180° 210° 240° 270° 300° 330° 0° 30° 60° 90° 120° 150° 180°

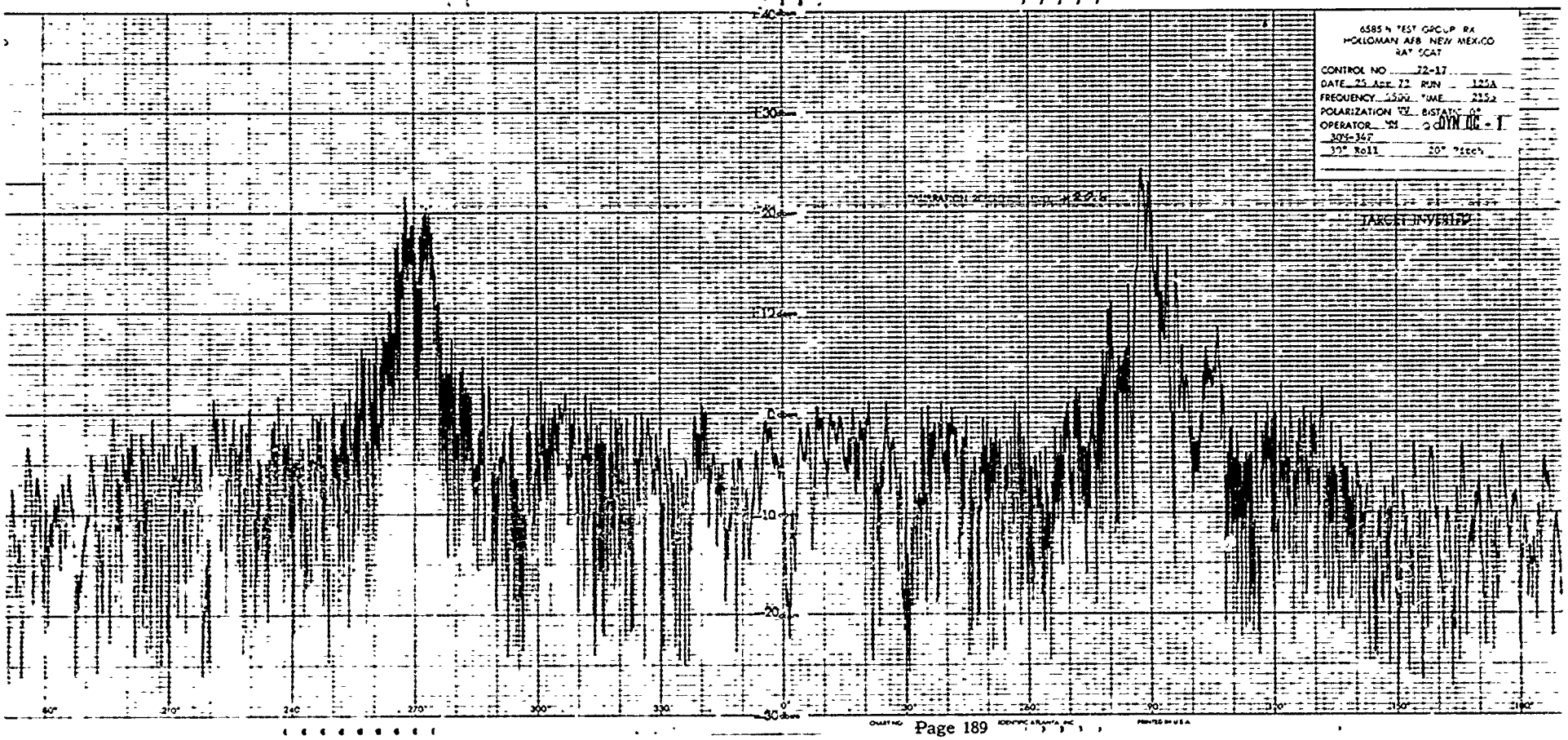

DYN GC - 1
TARGET INVERTED

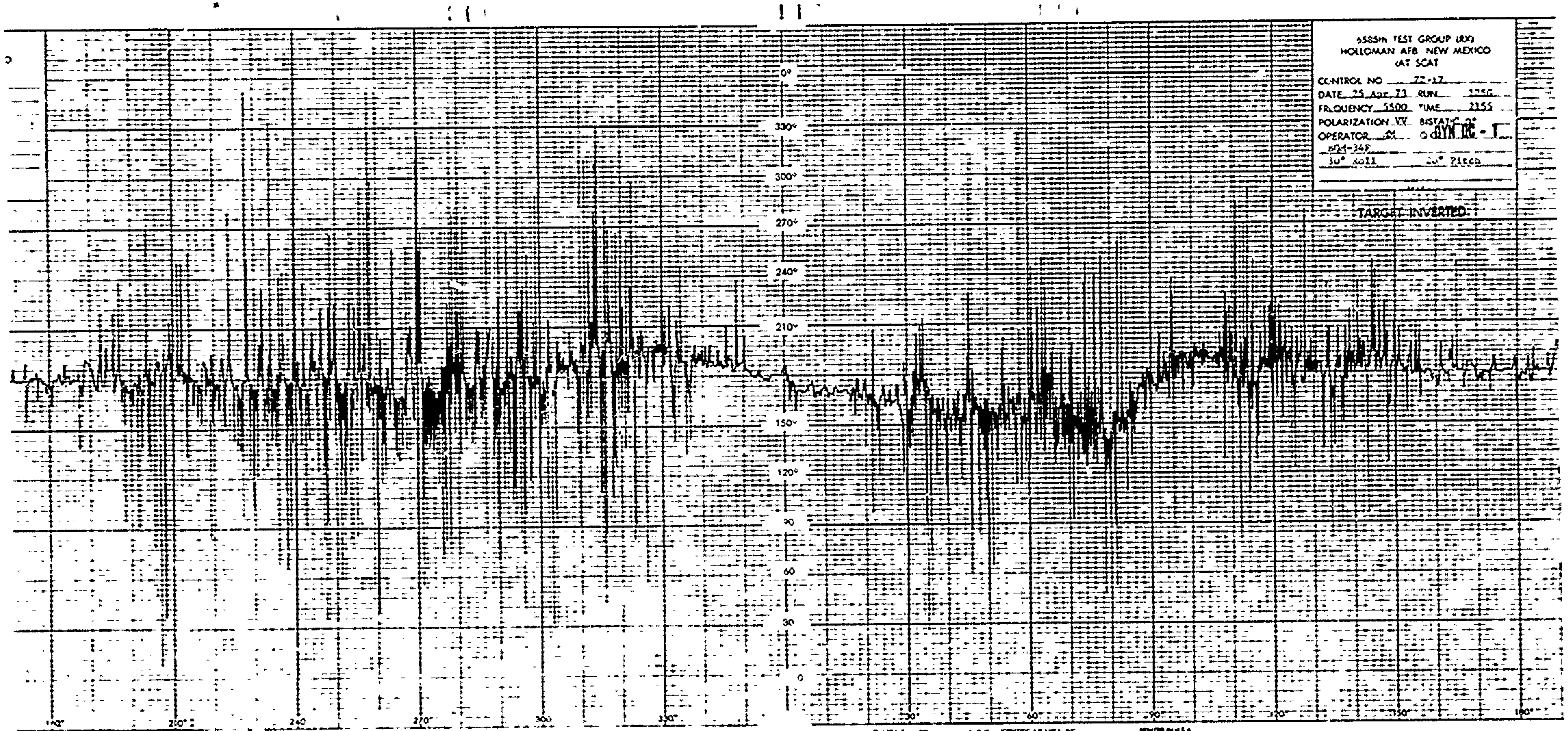

6585th TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
2AT SCAT
CONTROL NO 72-37
DATE 23 APR 73 RUN 119A
FREQUENCY 10 TIME 1330
POLARIZATION Vu BISTATIC 0°
OPERATOR SC DYNAMIC RCS - 1
50M-34F
0° Roll 25° Pitch
TARGET INVERTED
-40
-30
-20
-10
0
30
60
90
120
150
180
210
240
270
300
330

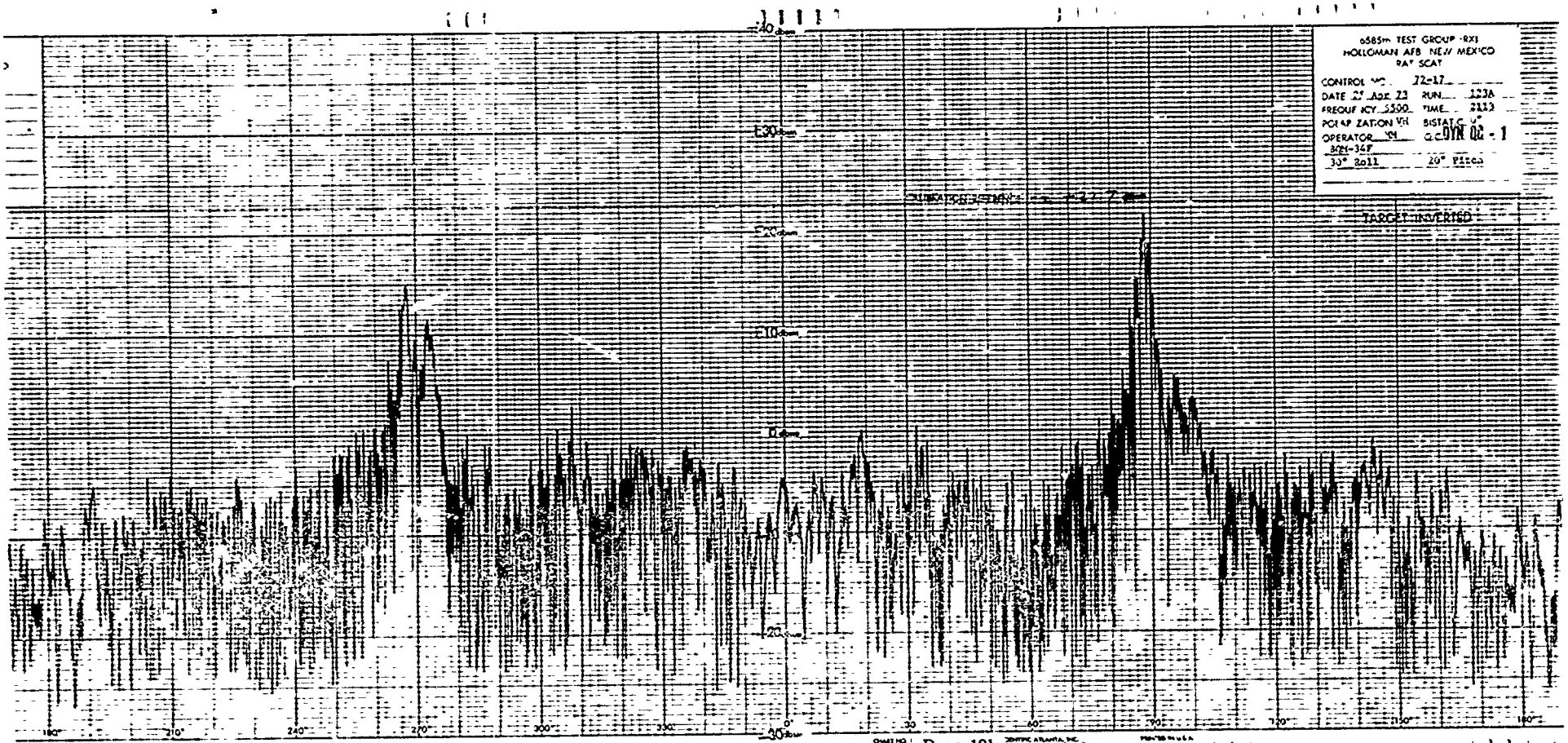

6585th TEST GROUP RXI
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 25 Apr 73 RUN 1196
FREQUENCY 5590 TIME 1330
POLARIZATION V-V BISTATIC 0°
OPERATOR SG
50ft-34F
0° Roll 33° Pitch
TARGET (AZ/ELEV)
0°
330
300°
270°
240°
210°
150
120°
90°
60
30
0
240
270
300
330
30°
60°
90°
120°
150°

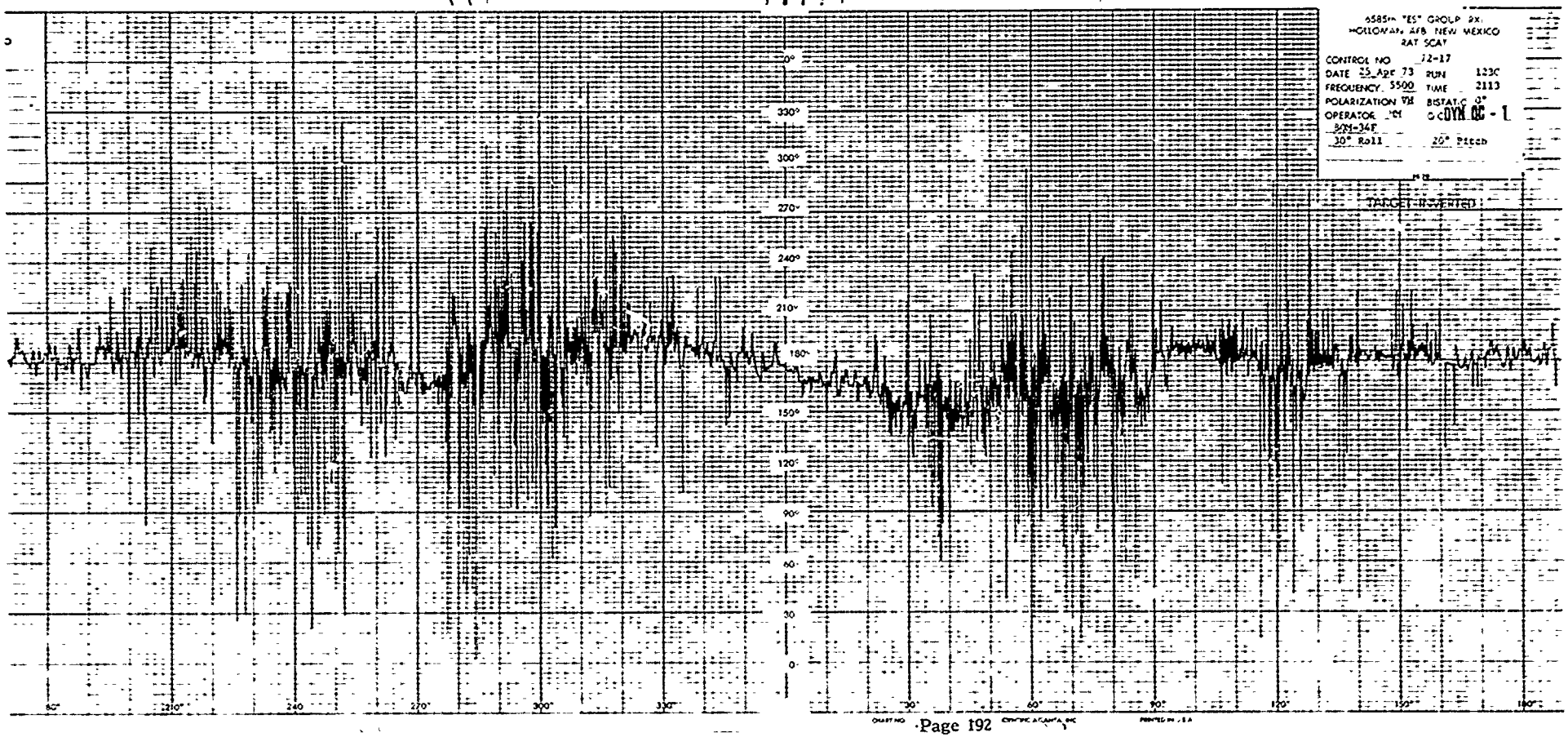

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 22-17
DATE 25 Apr 79 RUN 1211
FREQUENCY 5500 TIME 2030
POLARIZATION HH BISTAT C
OPERATOR GA
30H-34E
30° Roll 20° Ptch
TARGET INVERTED
-40dbsm
-30dbsm
-20dbsm
-10dbsm
0dbsm
10dbsm
20dbsm
30dbsm
90°
210°
240
270°
300°
330°
0°
30
60°
90°
210°
150°
180°

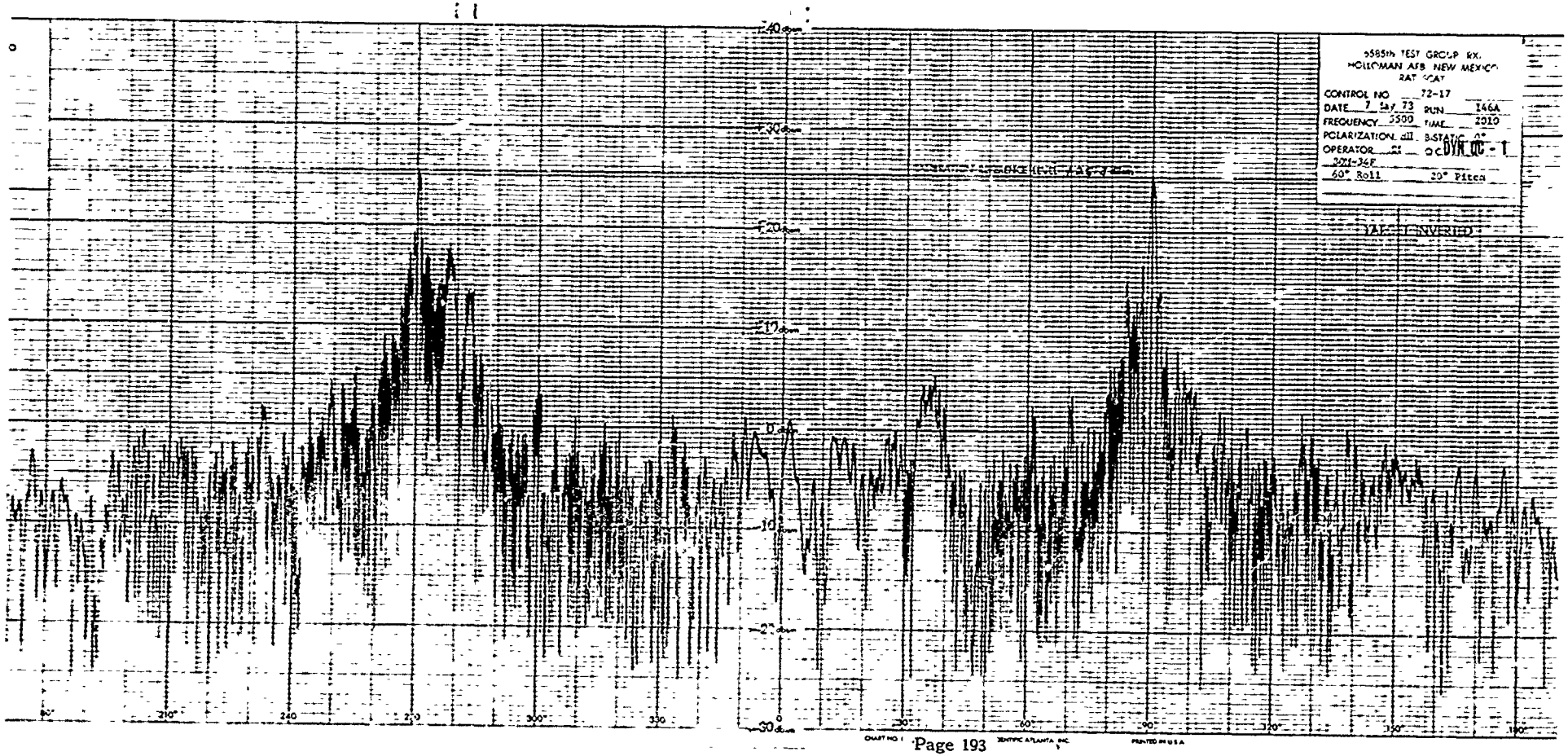

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 22 APR 73 RUN 1216
FREQUENCY 5500 TIME 2030
POLARIZATION HH BISTATIC 0°
OPERA OR YOK DYN 06 - 1
B/M-34F
30° Roll 20° Pitch
TARGET INVERTED
0°
330°
300°
270°
240°
210°
180°
150°
120°
90°
60°
30
0°
180°
210°
240°
270°
300°
330°
30°
60°
90°
120°
150°
180°

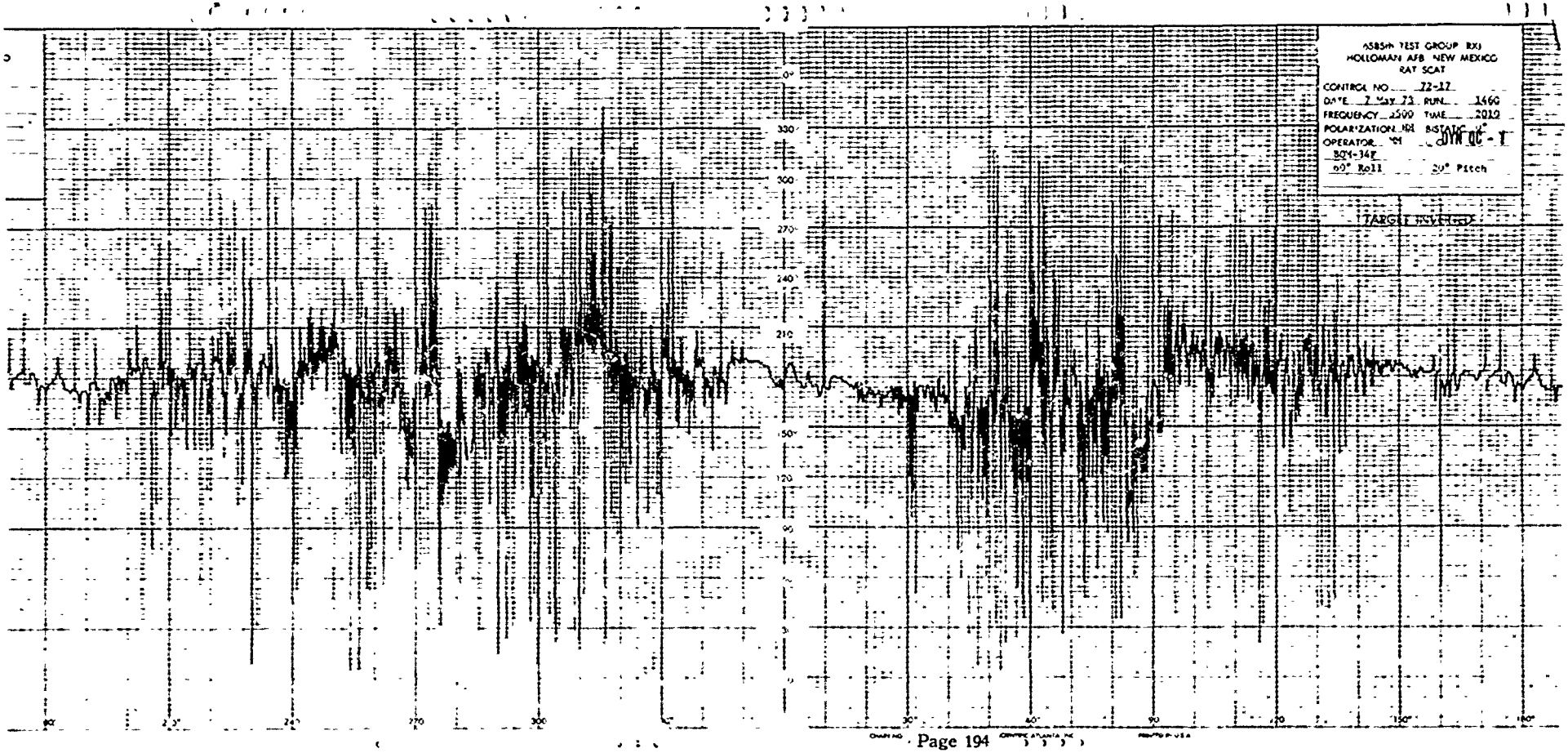

6585 h TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 25 Apr 72 RUN 125A
FREQUENCY 4500 TIME 2252
POLARIZATION VV BISTATIC 0°
OPERATOR PH
305-347
32° Roll 20° /sec
TARGET INVERTED
40
30
20
10
0
-10
-20
-30
60°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

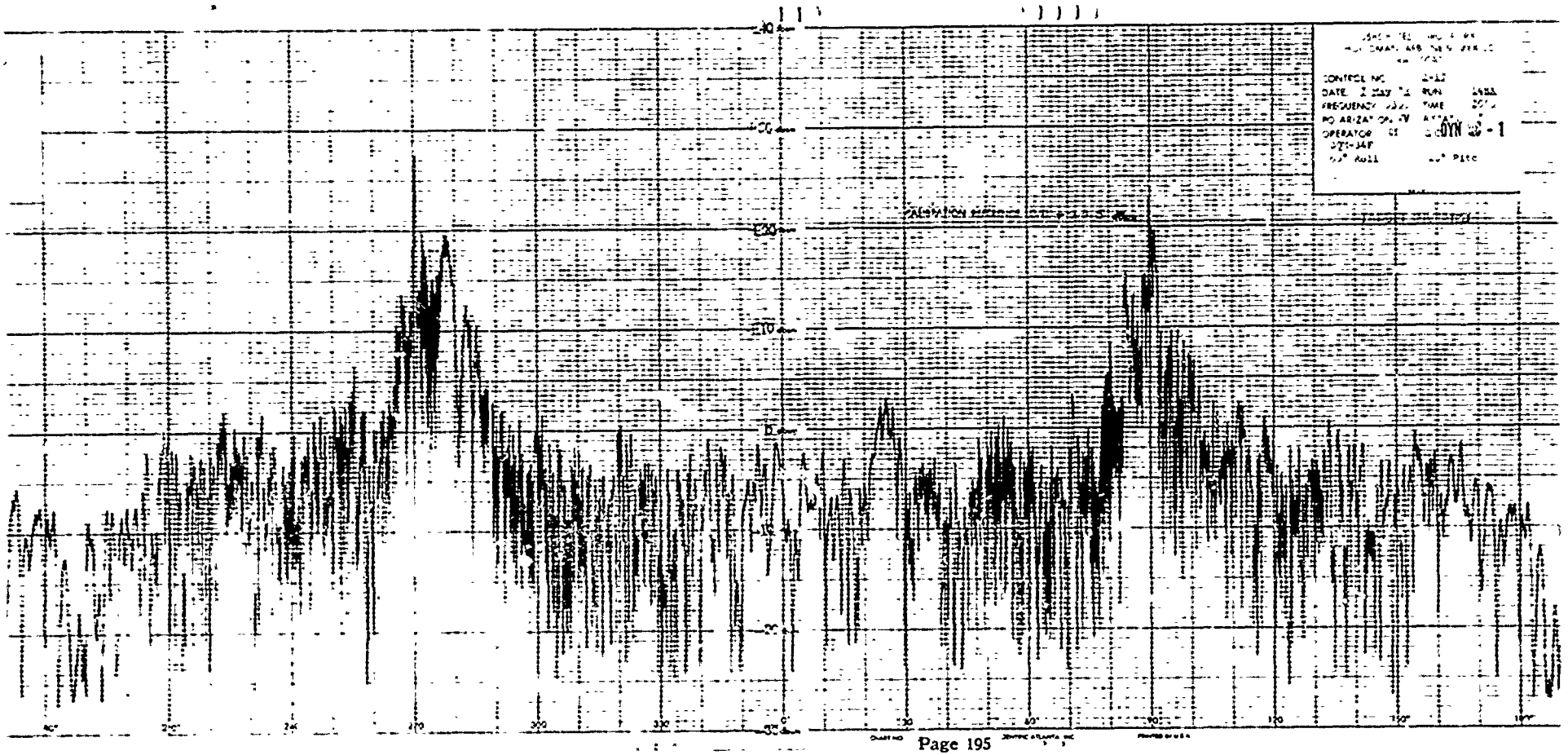

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 25 Apr 73 RUN 125G
FREQUENCY 5500 TIME 2155
POLARIZATION VV BISTATIC 0°
OPERATOR SK
RF4-34F
30° Roll 30° Pitch
TARGET INVERTED
0°
330°
300°
270°
240°
210°
150°
120°
90
60
30
0
180°
210°
240
270°
300
330°
30°
60°
90°
120°
150°
180°

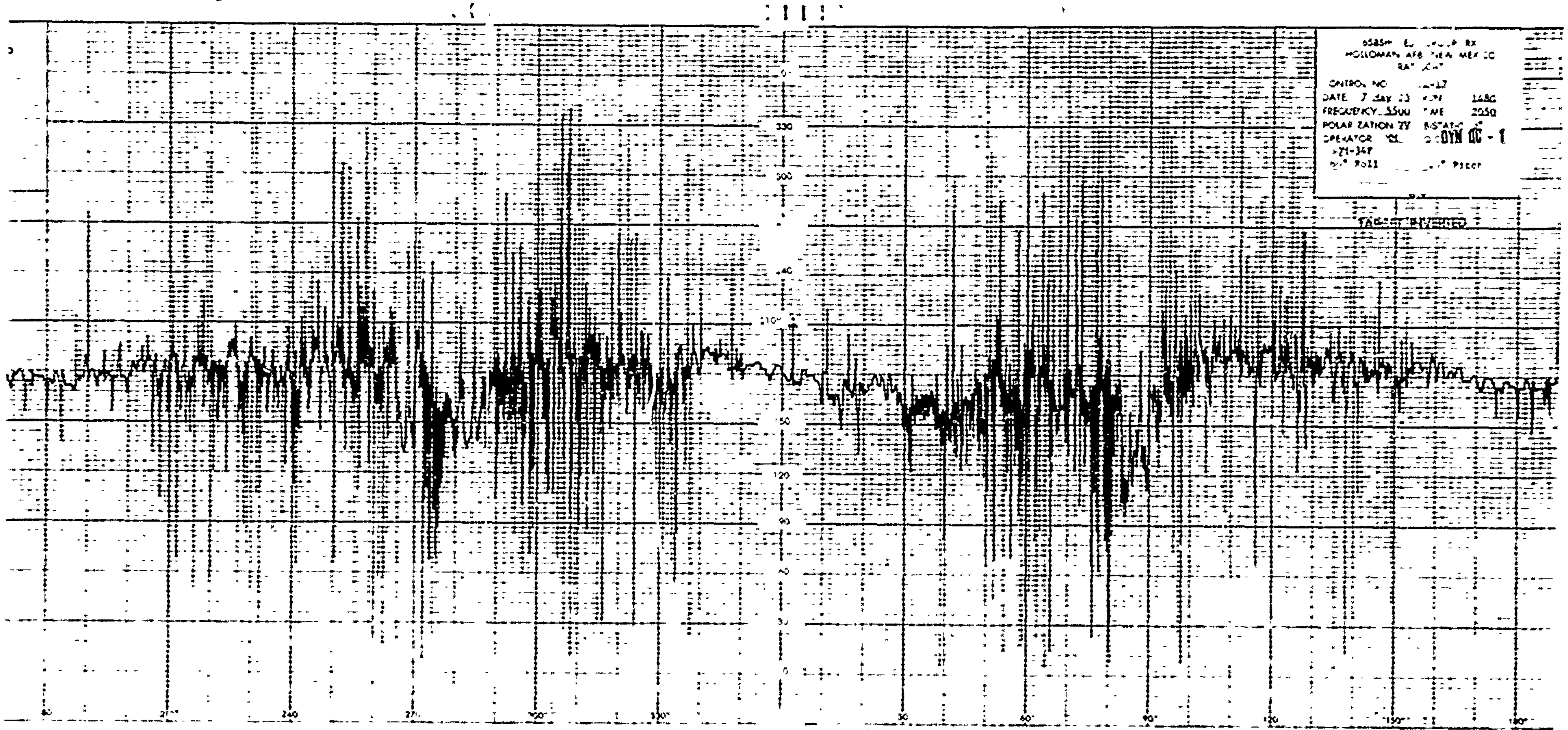

6585m TEST GROUP -RX1
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO. 72-17
DATE 27 AUG 73
RUN 1238
FREQUENCY 5590
TIME 2133
POLARIZATION VH
BISTATIC 0°
OPERATOR VH
DYN 02 - 1
30° Roll
20° Pitch
TARGET INVERTED
40
30
20
10
0
-10
-20
-30
180°
210°
240°
270°
300°
330°
0°
30
60°
90°
120°
150°
180°


6585th "ES" GROUP PX
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 25 Apr 73 RUN 123C
FREQUENCY 5500 TIME 2113
POLARIZATION VH BISTATIC 0°
OPERATOR CH DYNAMIC - L
30N-34E
30° Roll 20° Pitch
TARGET INVERTED
330°
300°
270°
240°
210°
180°
150°
120°
90°
60°
30
0
210°
240
270°
300°
330°
30°
60°
90°
120°
150°
180°

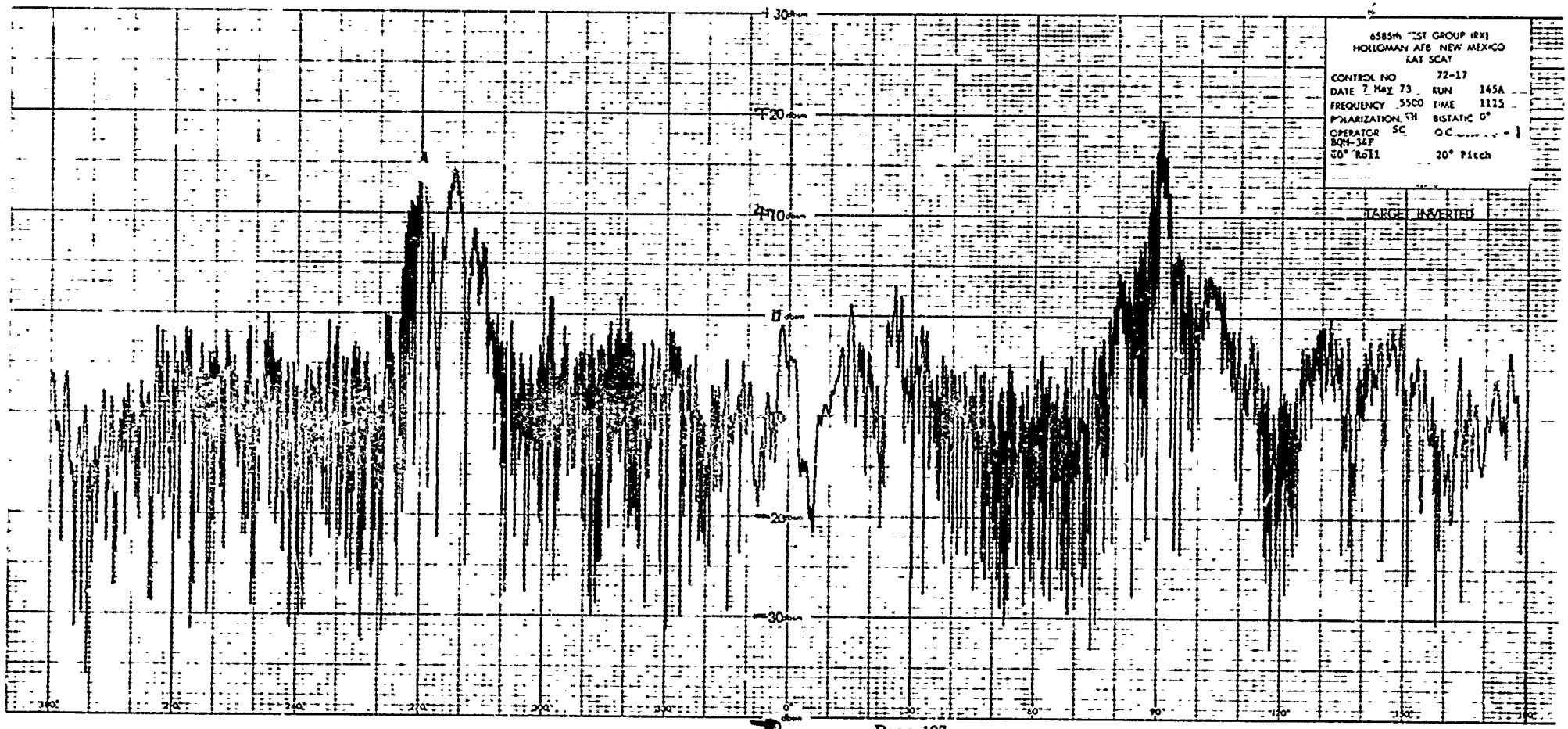

9585th TEST GROUP RX.
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 7 Sep 73 RUN 146A
FREQUENCY 5500 TIME 2010
POLARIZATION all BISTATIC 0°
OPERATOR SS OCDVR QC - 1
201-36F
60° Roll 20° Pitch
VAF INVERTED
-40 dBsm
-30 dBsm
-20 dBsm
-10 dBsm
0 dBsm
10 dBsm
20 dBsm
30 dBsm
210°
240
270
300°
330
0
30°
60°
90°
120°
150°
180°
CHART NO. 1
XERTEX ATLANTA, INC.
PRINTED IN U.S.A.

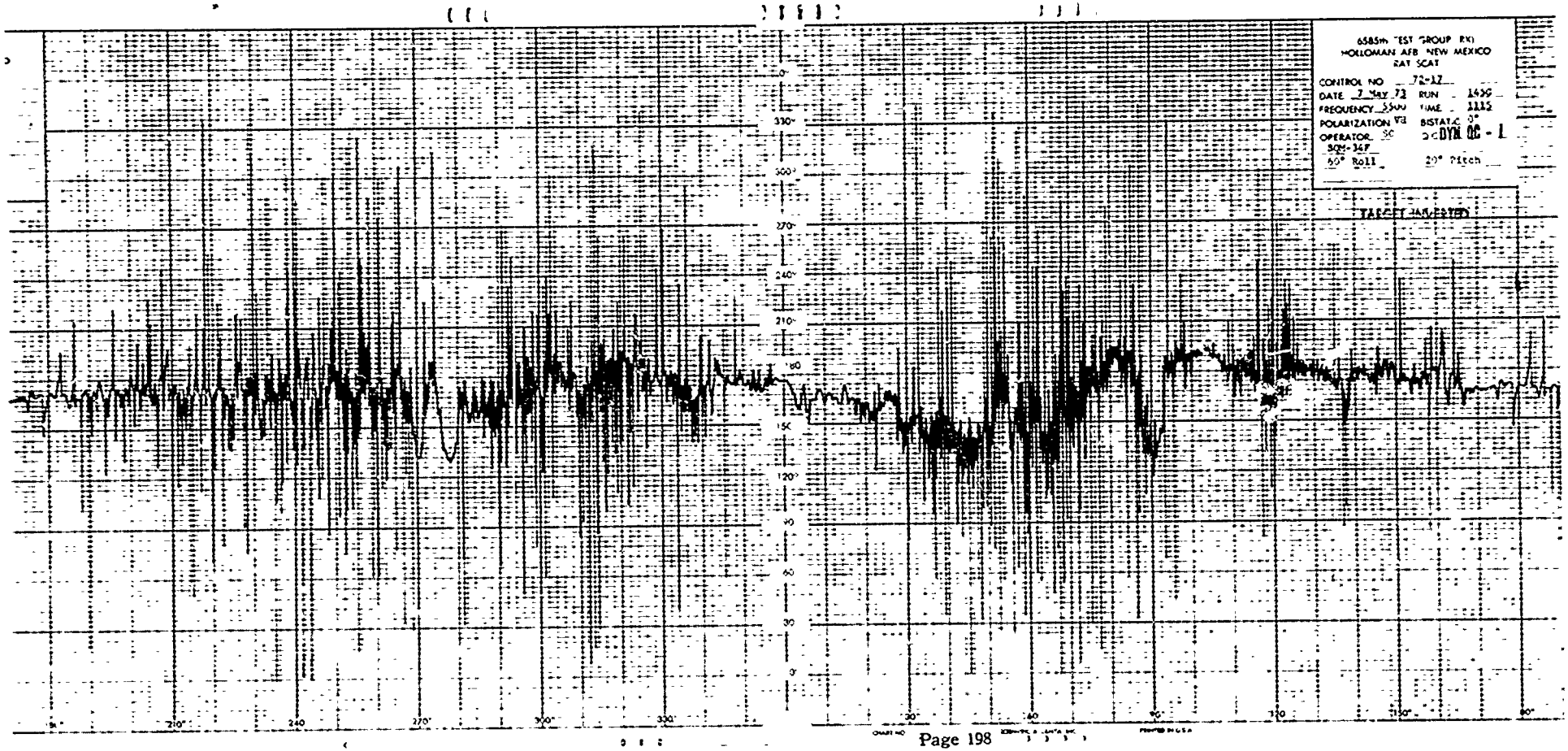

6585th TEST GROUP RXJ
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO. 72-17
DATE 2 May 73 RUN 1460
FREQUENCY 2509 TIME 2010
POLARIZATION HH BISTATIC 0°
OPERATOR KH
324-348
00° Roll 20° Pitch
TARGET INVERTED
0°
30°
60°
90°
120°
150°
180°
210°
240°
270°
300°
330°

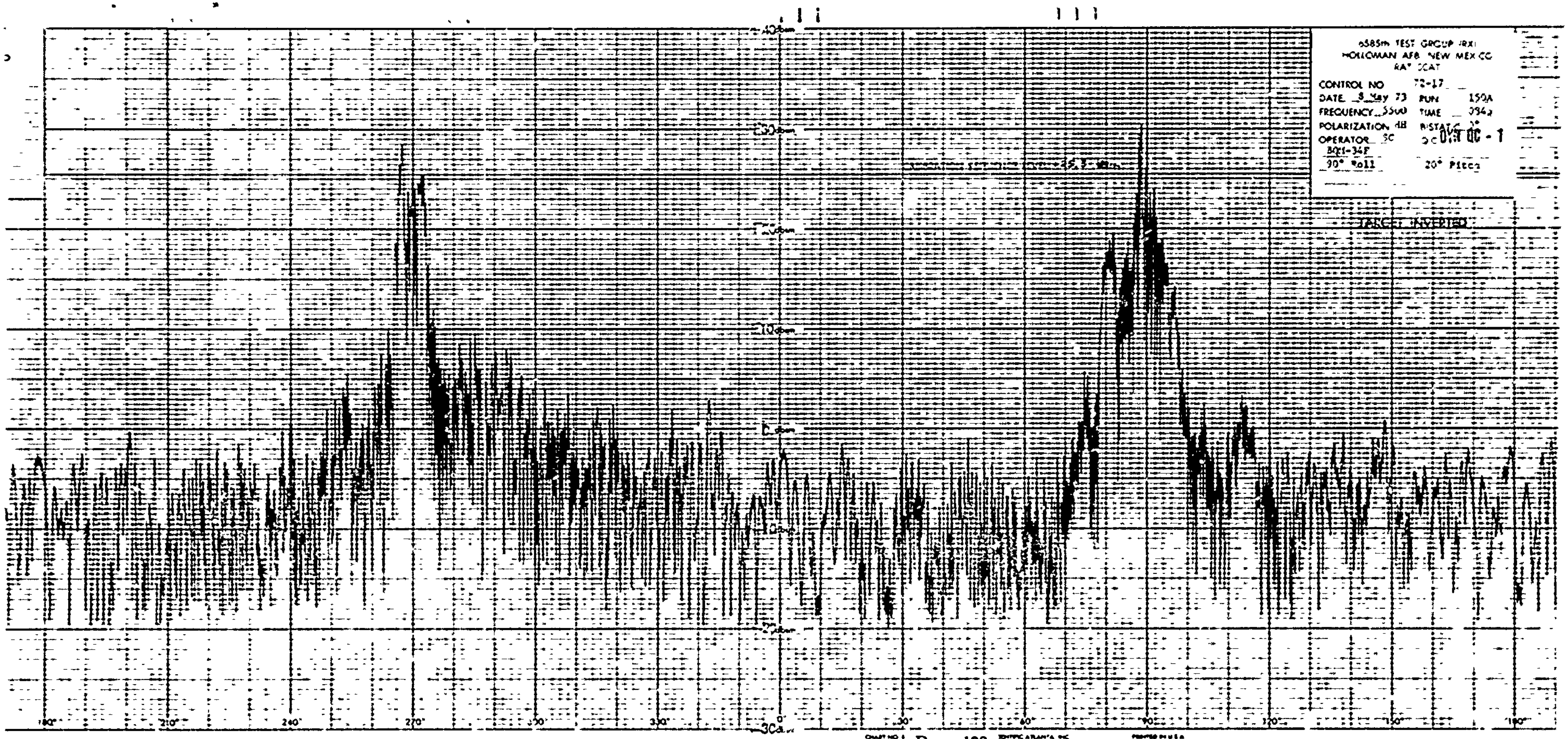


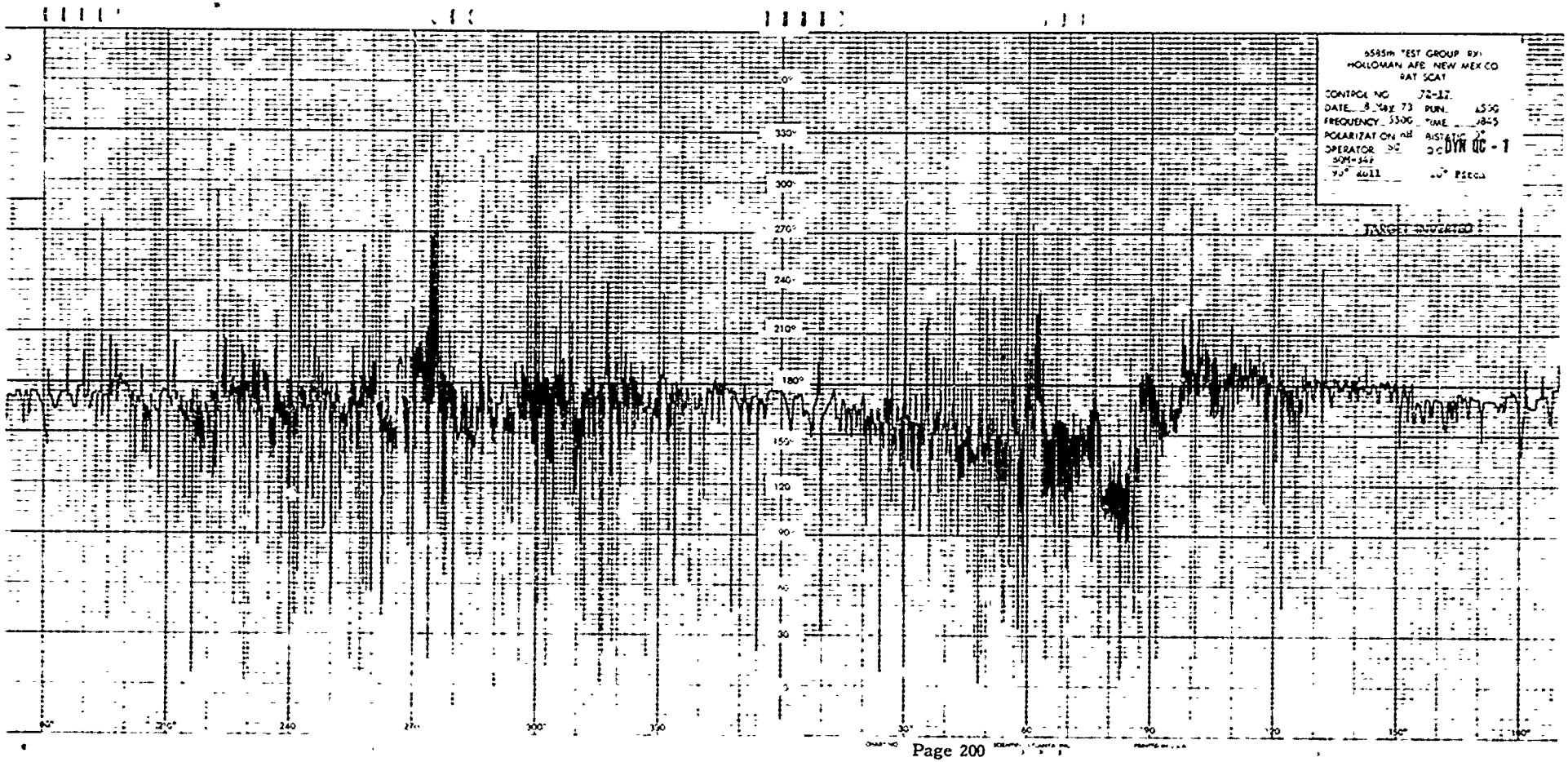


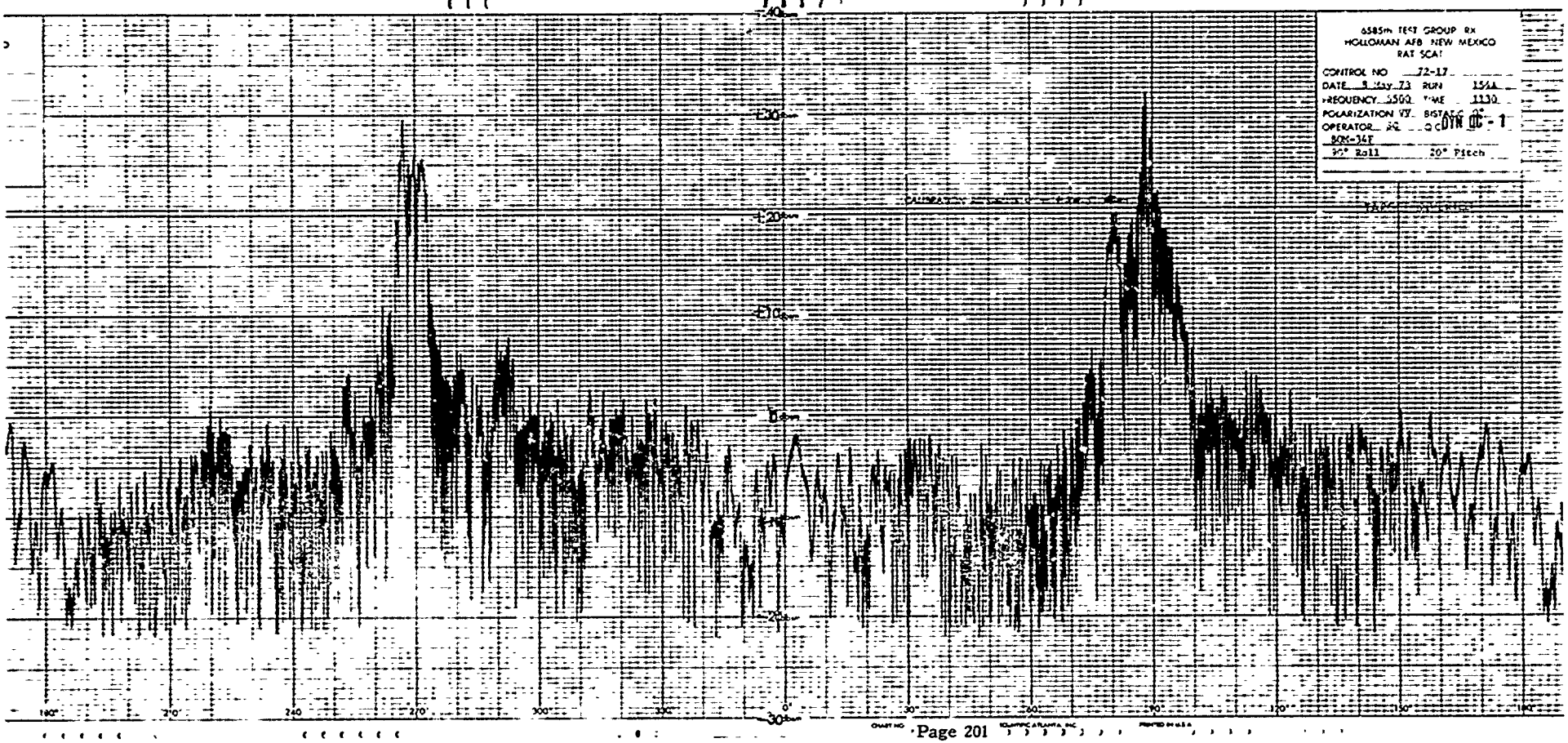
HOLLOMAN AFB
CONTROL NO
DATE 7
FREQUENCY
TIME 2250
POLARIZATION
BISTATIC
OPERATOR
DYN CC - 1
ROLL
PITCH
TARGET INVERTED
30
60
90
120
150
180
210
240
270
300
330

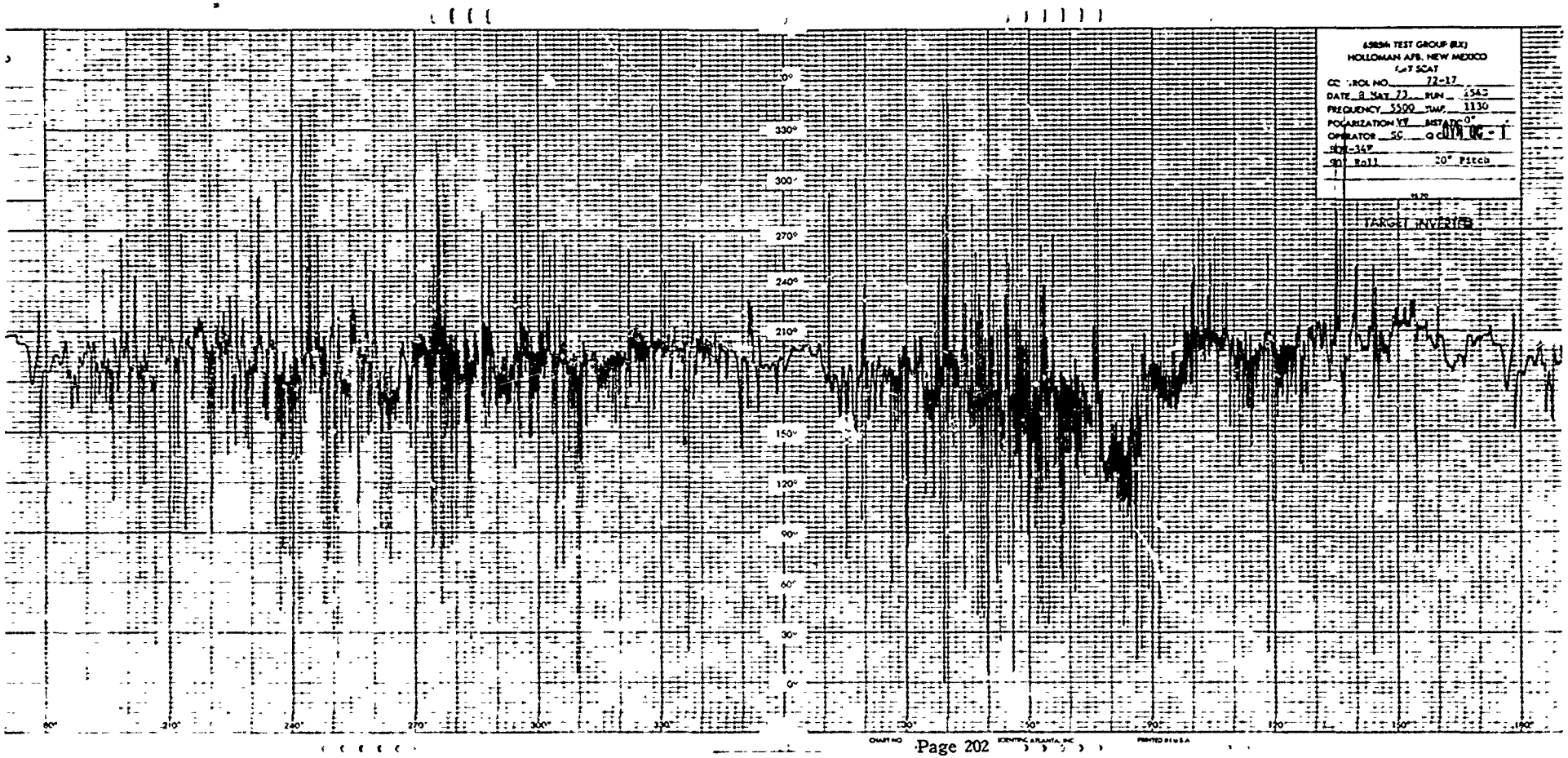

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
KAT SCAT
CONTROL NO 72-17
DATE 7 May 73
RUN 145A
FREQUENCY 5500
TIME 1115
POLARIZATION STH
BISTATIC 0°
OPERATOR SC
QC
BQM-34F
60° Roll
20° Pitch
TARGET INVERTED
-30 dbsm
-20 dbsm
-10 dbsm
0 dbsm
10 dbsm
20 dbsm
30 dbsm
360°
30°
60°
90°
120°
150°
180°
210°
240°
270°
300°
330°

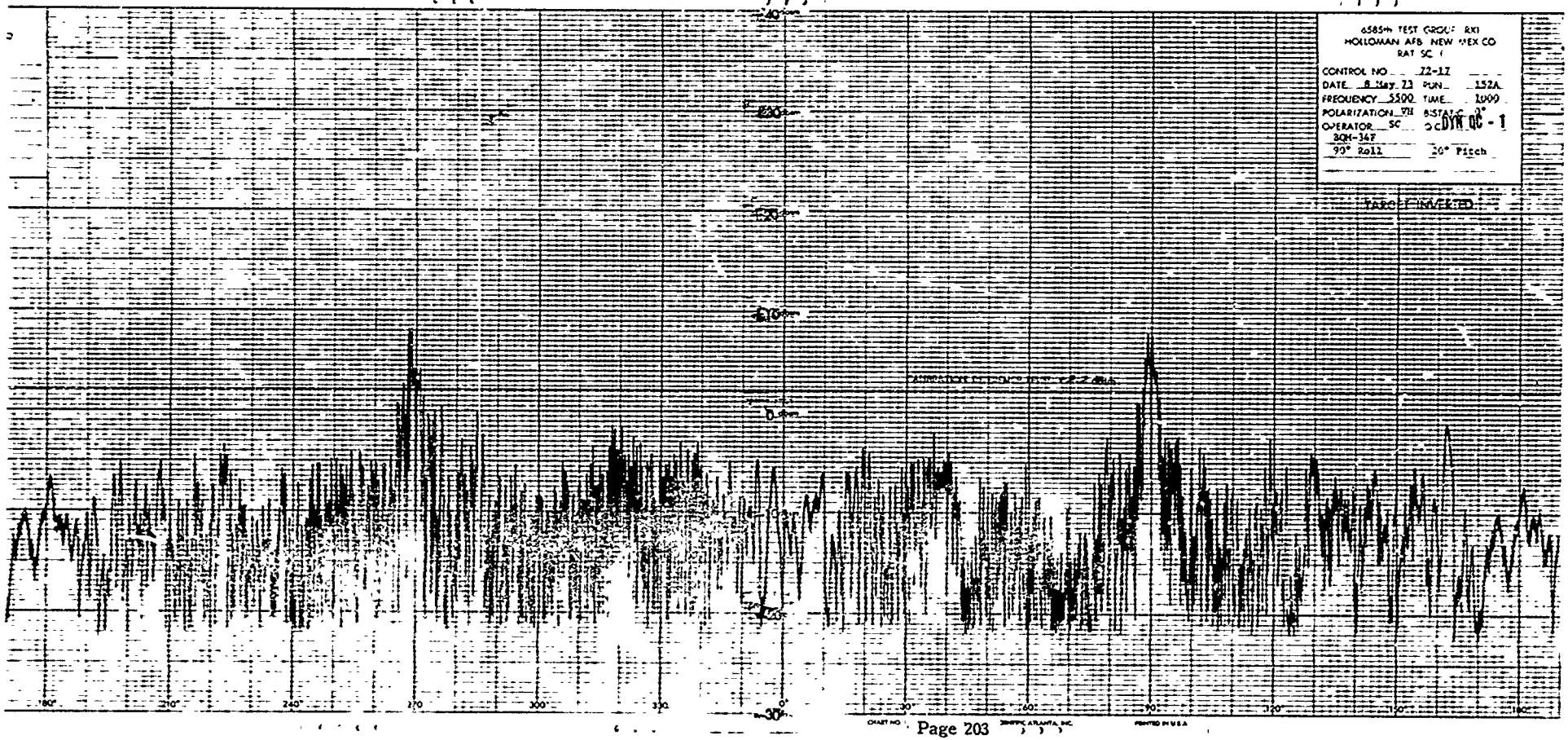

6585m TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-12
DATE 7 May 73
RUN 1439
FREQUENCY 5500
TIME 1115
POLARIZATION V3
BISTATIC 0°
OPERATOR SC
DYN OC - 1
SQM-36F
60° Roll
20° Pitch
TARGET (MASTER)
0°
30°
60°
90°
120°
150°
180°
210°
240°
270°
300°
330°
360°

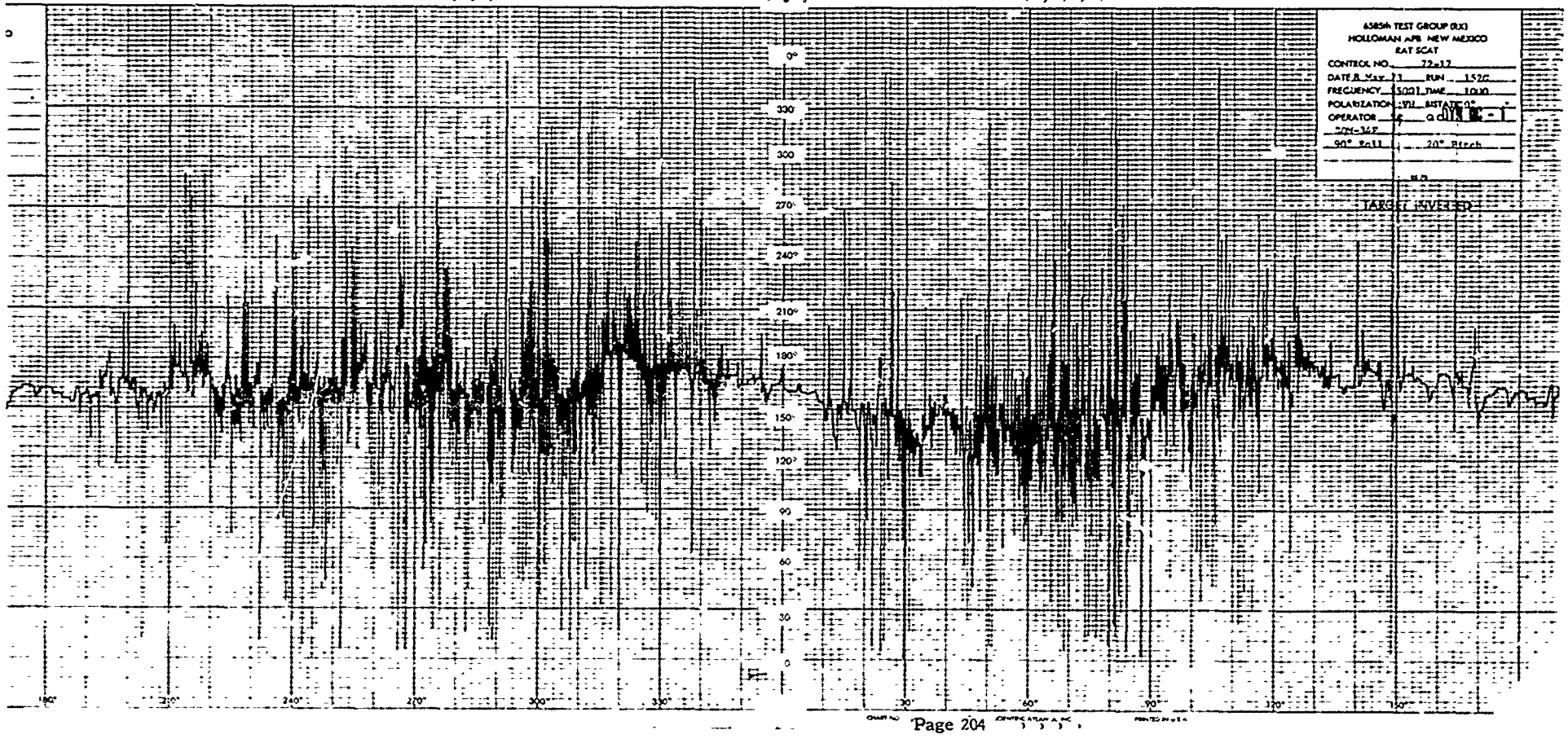

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 3 May 73
RUN 159A
FREQUENCY 5500
TIME 0942
POLARIZATION HH
OPERATOR SC
BQM-34F
90° Roll
20° Pitch
TARGET INVERTED
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

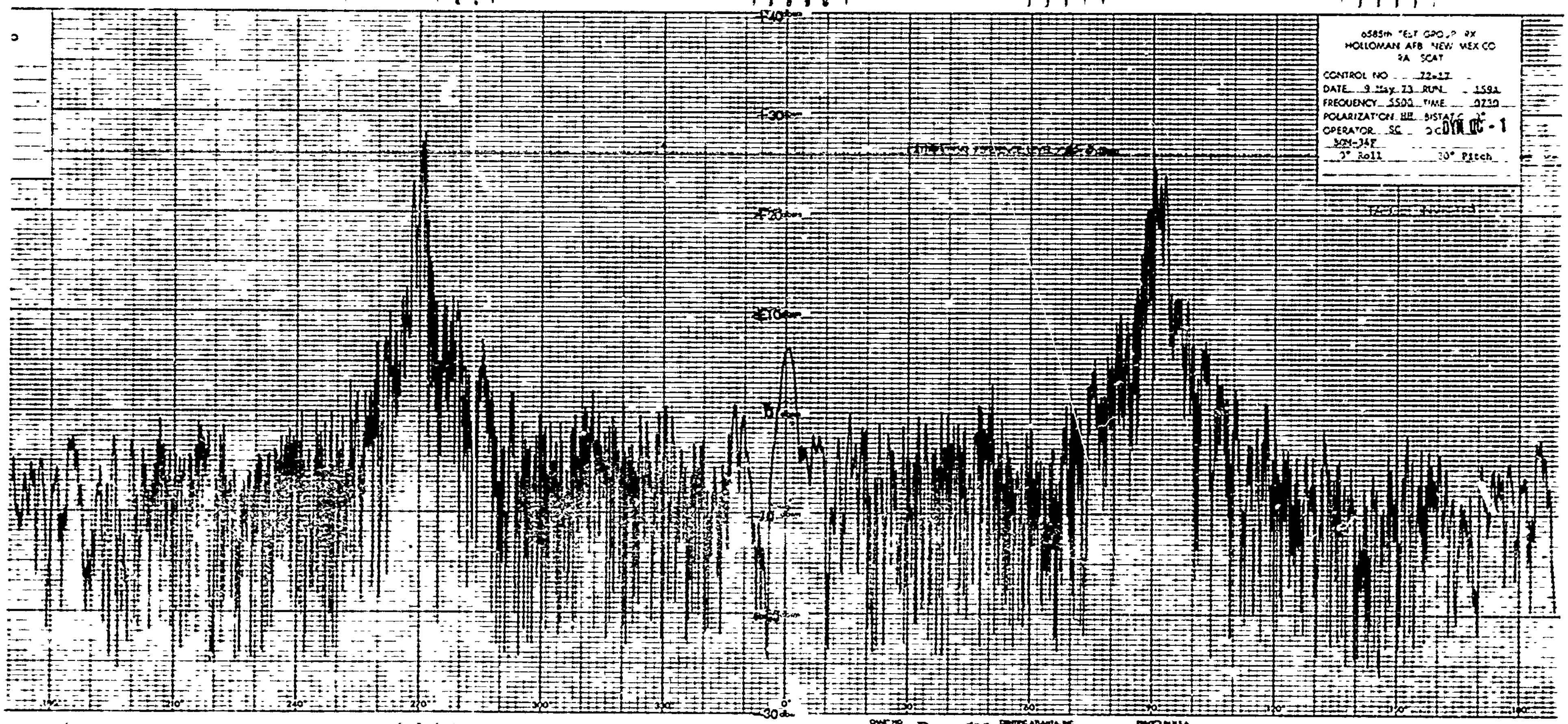

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEX CO
RAT SCAT
CONTROL NO 72-17
DATE 8 Sep 73 RUN 1530
FREQUENCY 5300 TIME 1845
POLARIZATION HH BISTATIC 0°
OPERATOR DC
90M-349
90° 4011 40° Pitch
DYN QC - 1
TARGET INVERTED
330°
300°
270°
240°
210°
180°
150°
120°
90°
60°
30°

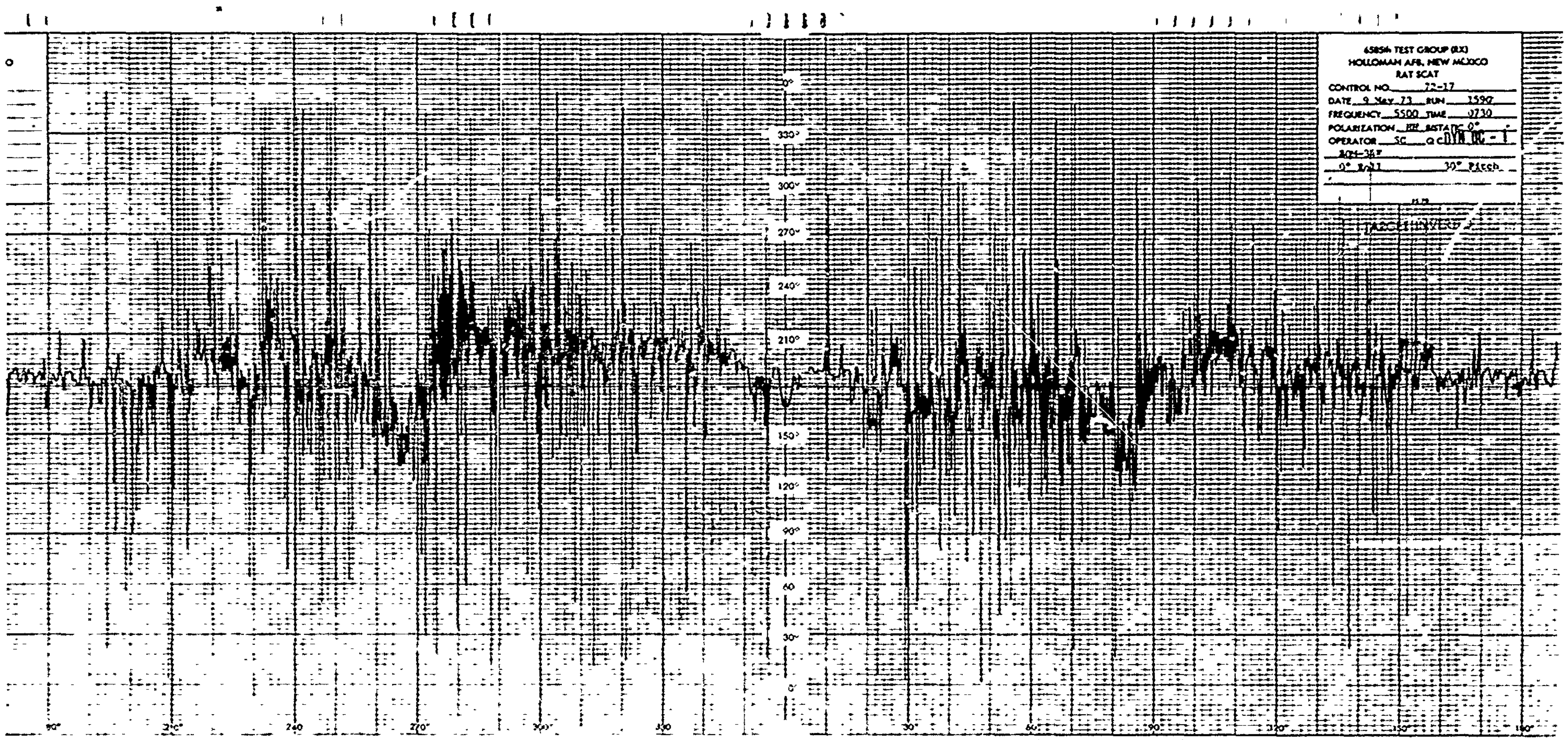

6585m TEST GROUP Rx
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 8 May 73 RUN 15AA
FREQUENCY 6560 TIME 1130
POLARIZATION VV BISTATIC
OPERATOR SG
80S-34E
35° Roll 20° Pitch
DYN RC - 1
-40dBsm
-30dBsm
-20dBsm
-10dBsm
0dBsm
+10dBsm
+20dBsm
+30dBsm
180°
210°
240
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°


6585th TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
(AFSCAT
CONTROL NO. 72-17
DATE 8 SEP 73 RUN 6563
FREQUENCY 5500 TUNE 1130
POLARIZATION VV BISTATIC 0°
OPERATOR SC CHART NO. 1
SCR-348
90 Roll 20° Pitch
TARGET INVERTED
0°
330°
300°
270°
240°
210°
150°
120°
90°
60°
30°
0°
210°
240°
270°
300°
330°
30°
90°
150°
180°


6585th TEST GROUP RKI
HOLLOMAN AFB NEW MEX CO
RAT SC 1
CONTROL NO 22-12
DATE 8 May 73 RUN 152A
FREQUENCY 5500 TIME 1009
POLARIZATION VH BISTATIC 0°
OPERATOR SC DYN QC - 1
3QM-347
90° Roll 30° Pitch
TARGET INVERTED
+40°
+20°
+10°
0°
-30°
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°


6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO. 72-37
DATE 8 May 73 RUN 1526
FREQUENCY 5003 TIME 1000
POLARIZATION VH BISTATIC 0°
OPERATOR
20° Pitch
90° Roll
TARGET INVERTED
0°
330°
300°
270°
240°
210°
180°
150°
120°
90
60
30
0
90°
120°
150°
180°
210°
240°
270°
300°
330°
30°
60°
90°
120°
150°


6585th TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
RA SCAT
CONTROL NO 72-17
DATE 9 May 73 RUN 1591
FREQUENCY 5500 TIME 0730
POLARIZATION HH BISTATIC
OPERATOR SC
DYN DC - 1
3° Roll
30° Pitch
+40 dbm
+30 dbm
+20 dbm
+10 dbm
0 dbm
-10 dbm
-20 dbm
-30 dbm
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°


6585th TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO. 72-17
DATE 9 May 73 RUN 3592
FREQUENCY 5500 TIME 0730
POLARIZATION HH BISTATIC 0°
OPERATOR SC
0° Roll 30° Pitch
0°
330°
300°
270°
240°
210°
150°
120°
90°
60
30°
0°
90°
240
270°
300°
330
30°
60°
90°
120°
150°
180°
CHART NO
SCIENTIFIC ATLANTA, INC
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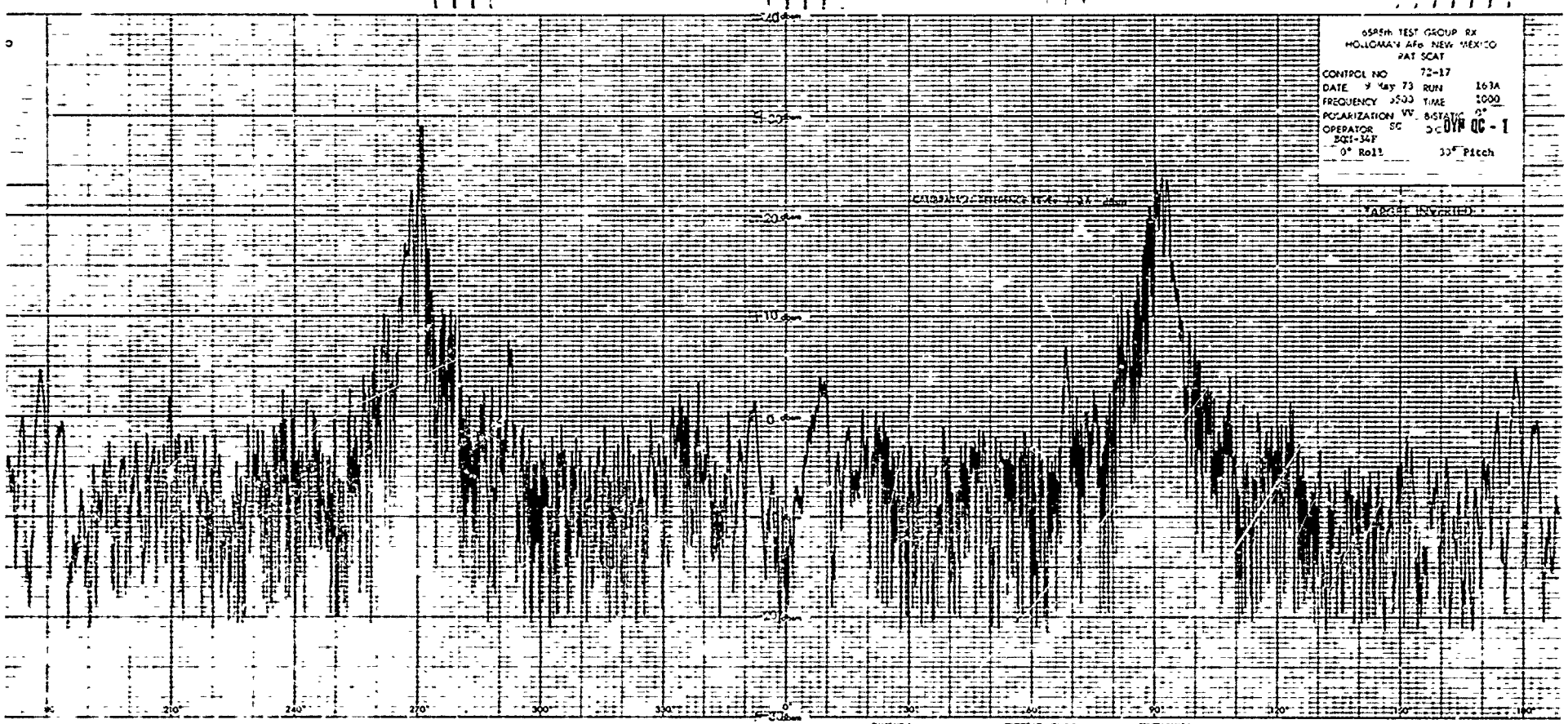
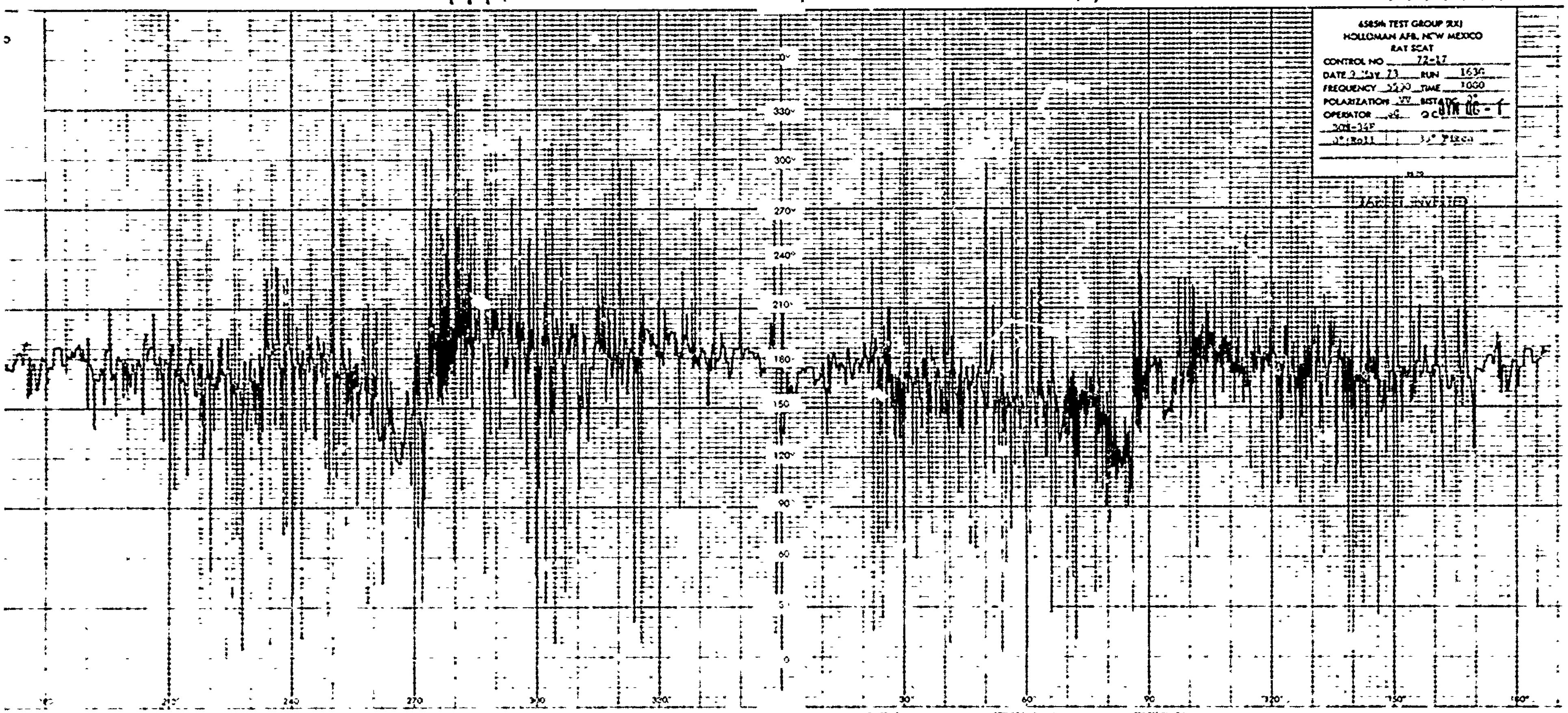
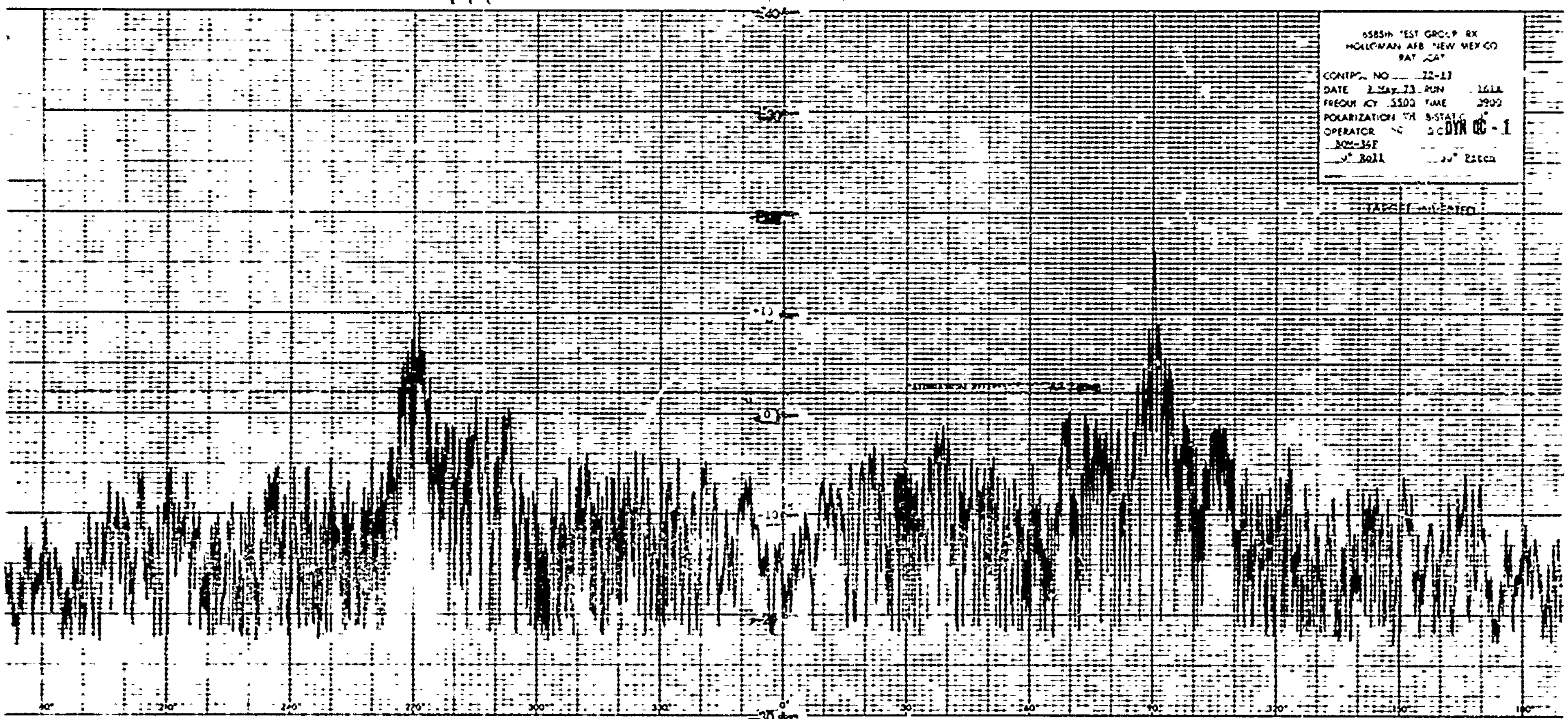
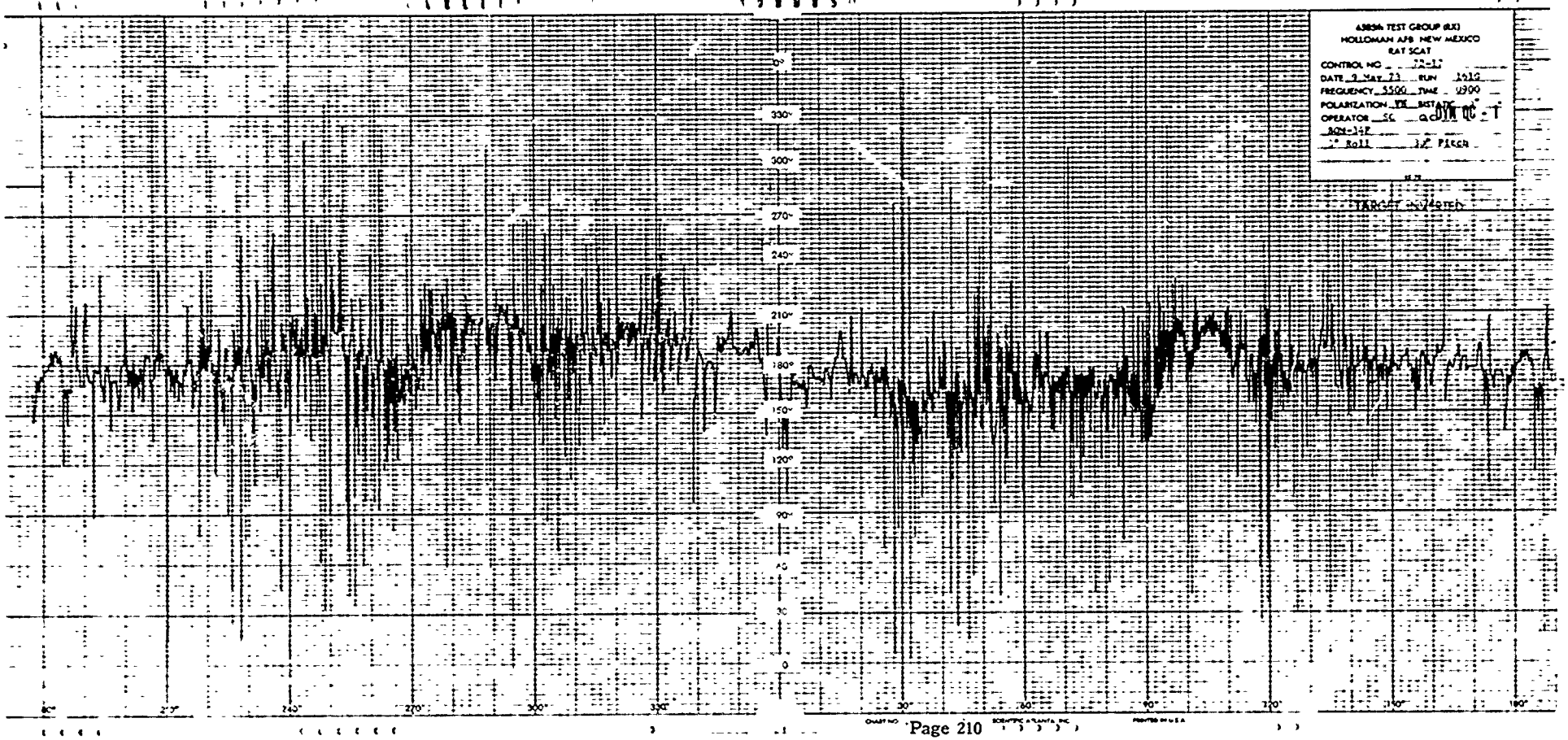

6595th TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
PAT SCAT
CONTROL NO 72-17
DATE 9 May 73 RUN 163A
FREQUENCY 9503 TIME 1000
POLARIZATION VV BISTATIC 0°
OPERATOR SC DYN QC - 1
BOI-34F
0° Roll 33° Pitch
TARGET INVERTED
-40 dBsm
-30 dBsm
-20 dBsm
-10 dBsm
0 dBsm
+10 dBsm
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

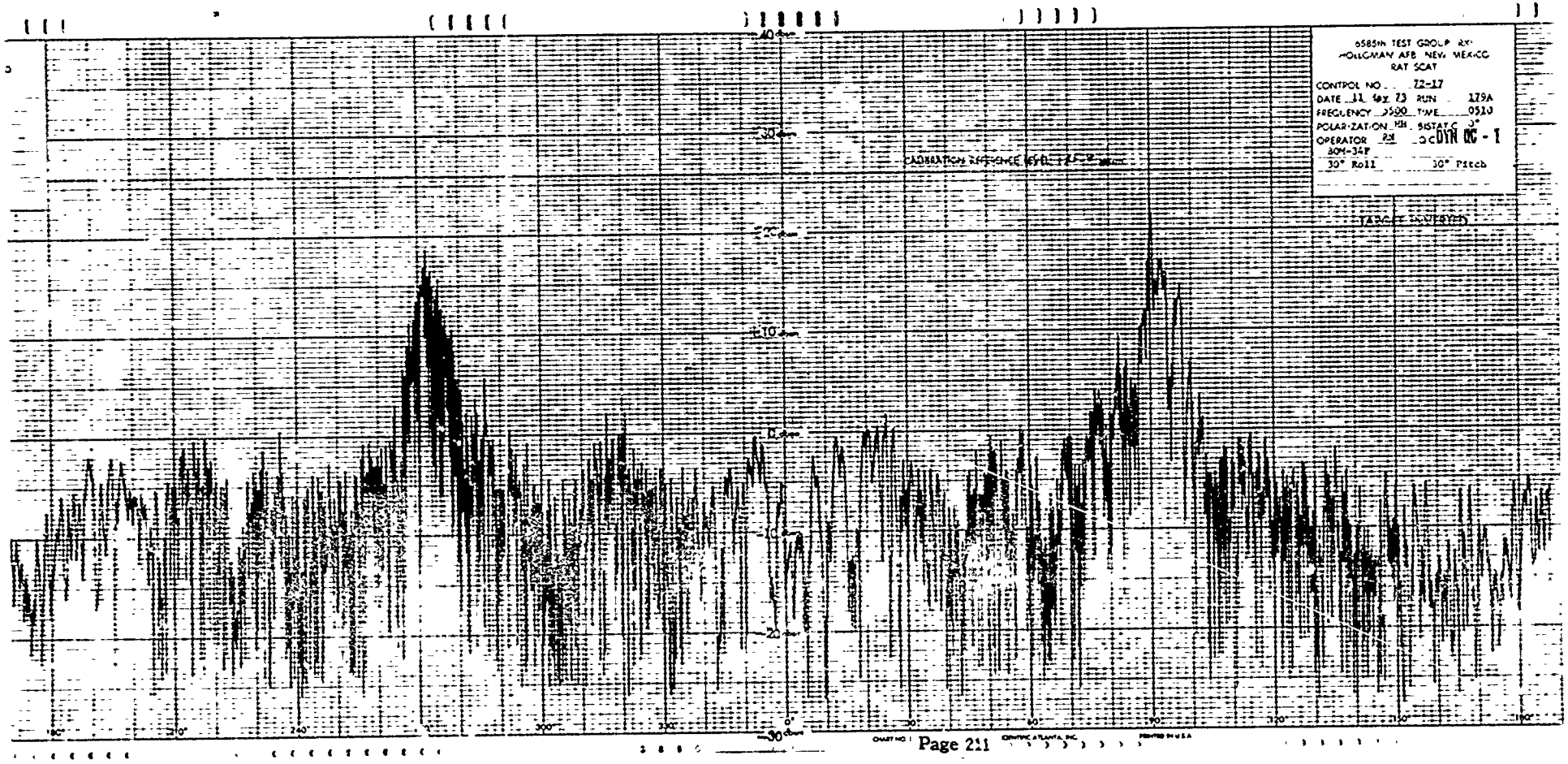


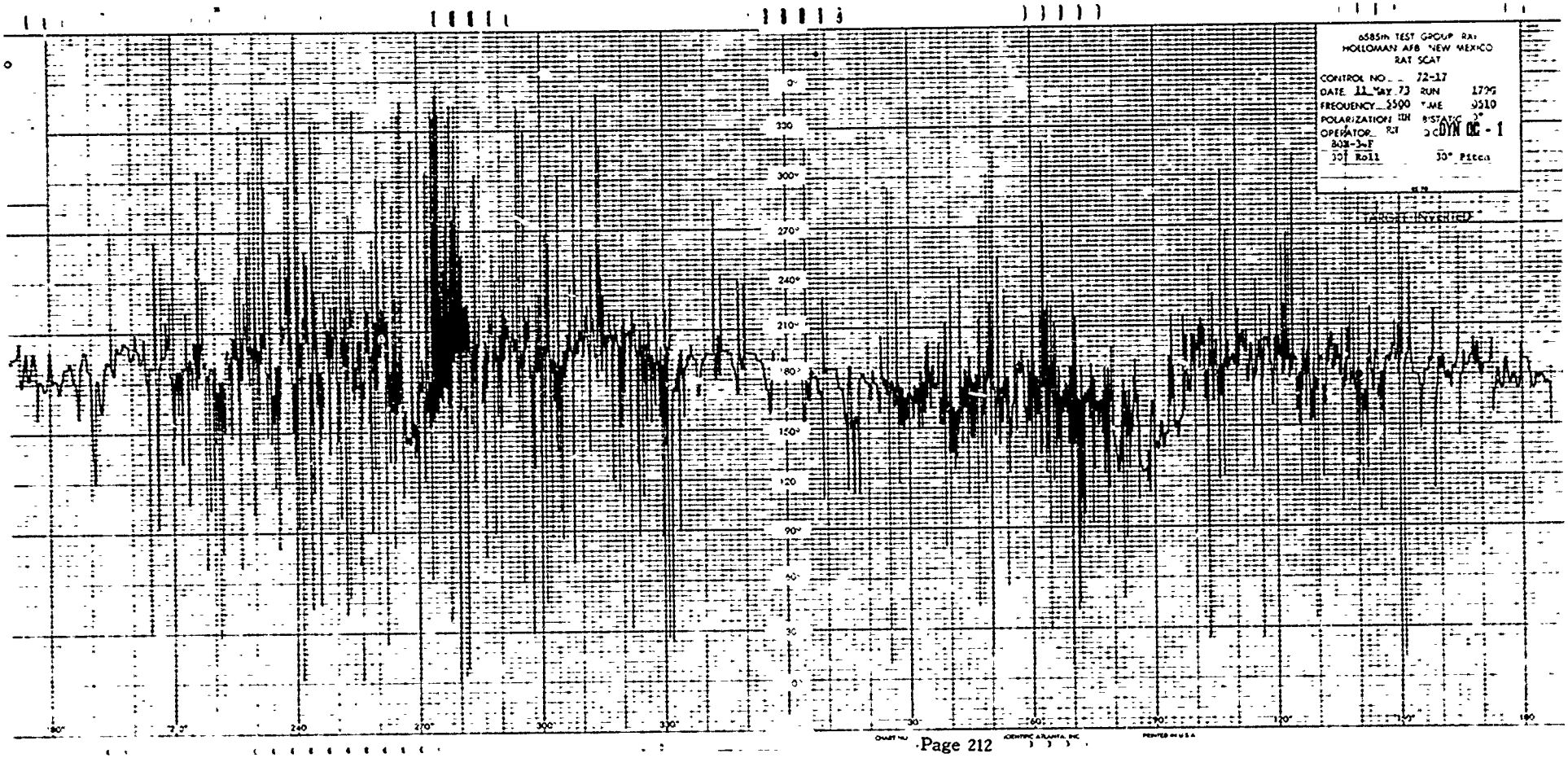
6585th TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 3 May 73 RUN 1636
FREQUENCY 5530 TIME 1000
POLARIZATION VV
330°
300°
270°
240°
210°
180°
150°
120°
90°
60
0
210°
240
270
300
330°
30°
60°
90
120°
150°
180°

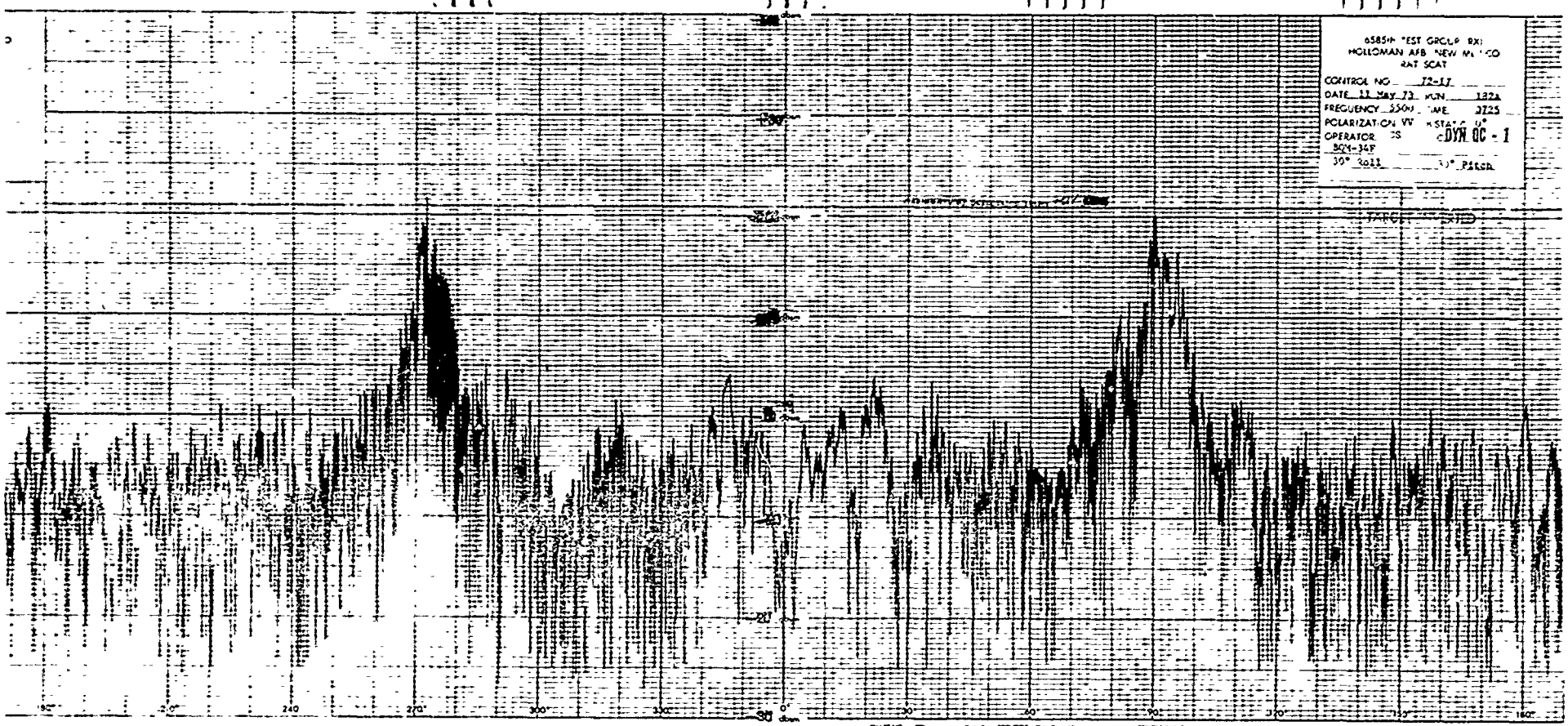


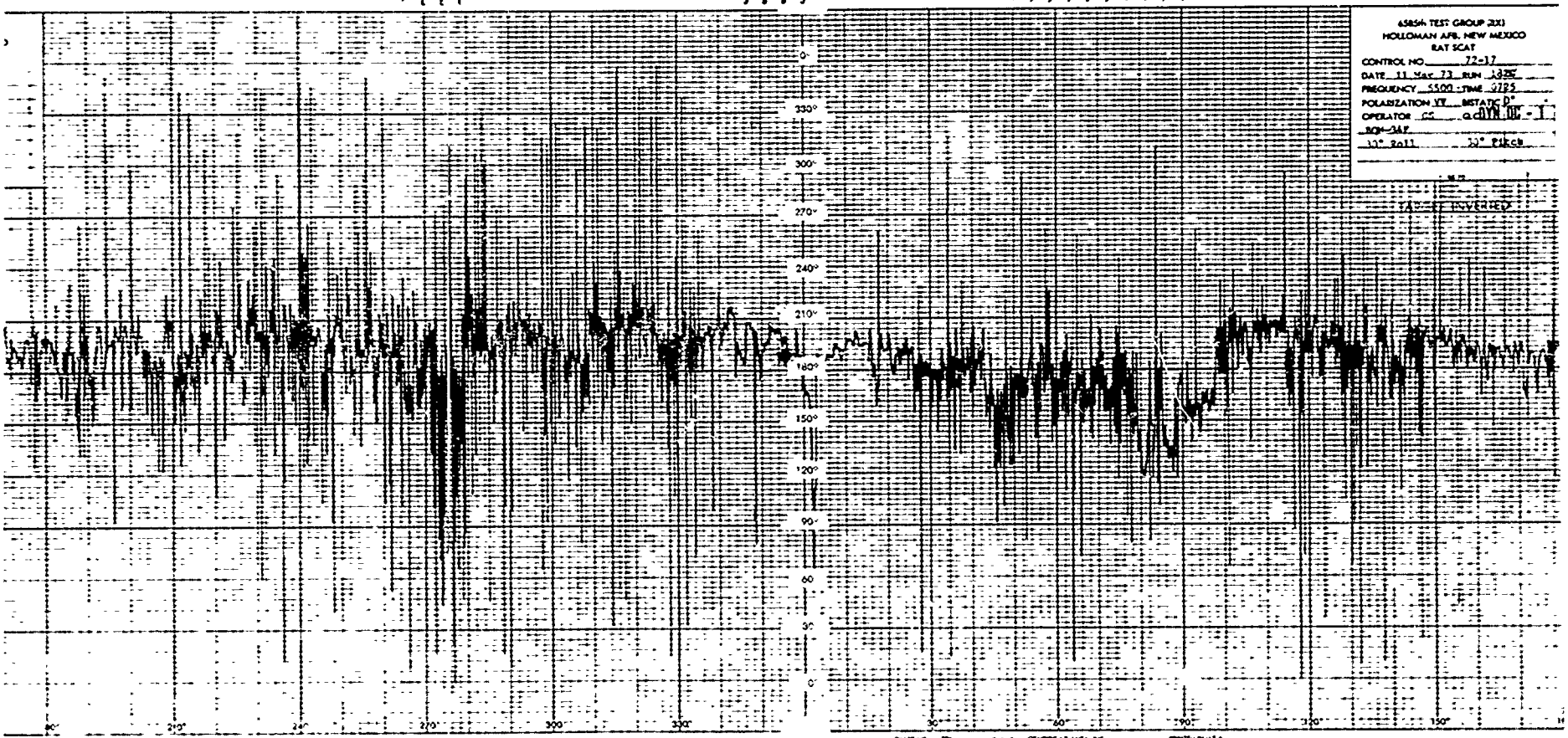
6585th TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
CONTROL NO 72-13
DATE 2 May 73 RUN
FREQUENCY 5500 TIME
POLARIZATION
OPERATOR
DYN CC - 1
BOM-36F
Roll
+40 dbm
+30
+10
0
-10
-20
-30 dbm
0°
30°
60°
90°
120°
150°
180°
210°
240°
270°
300°
330°

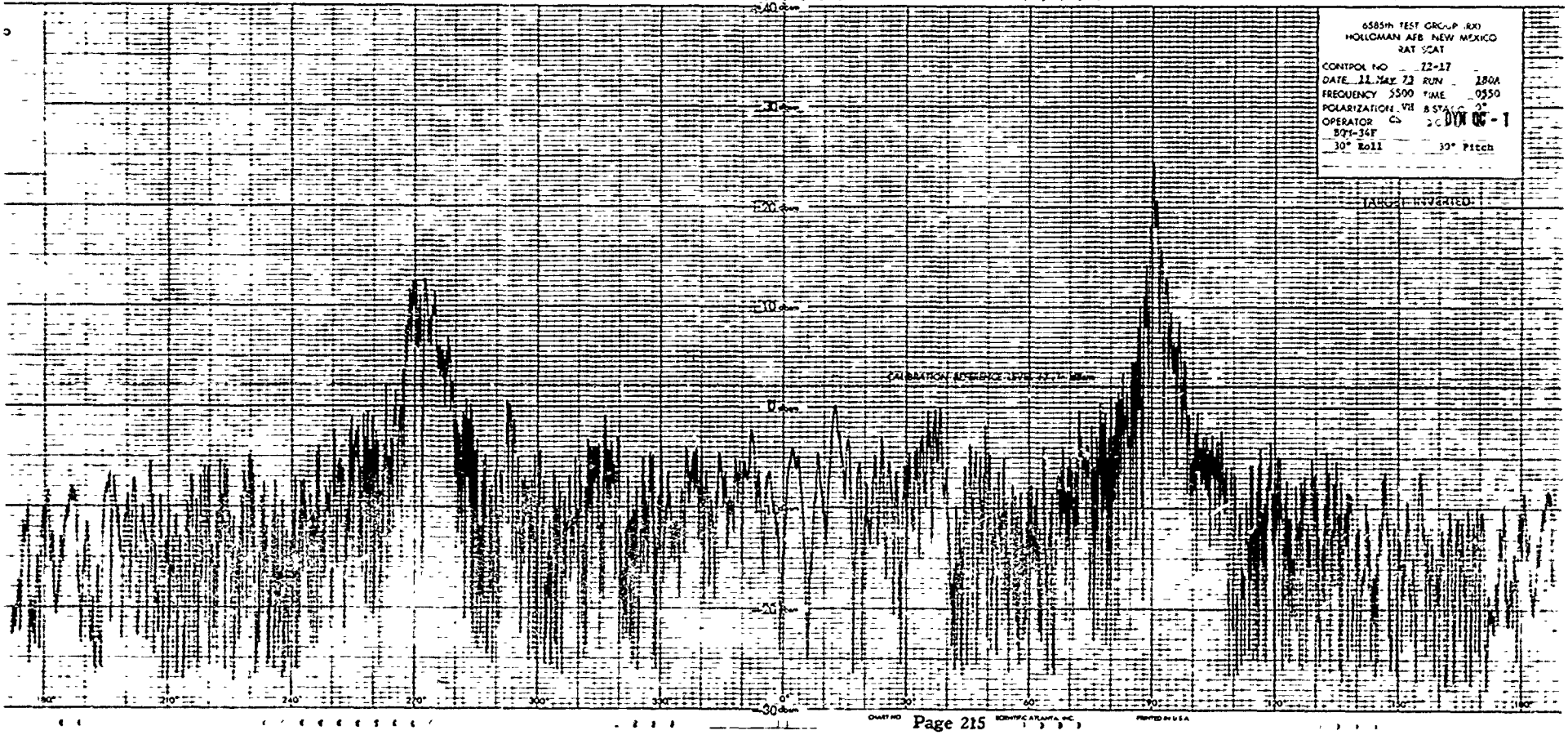

45836 TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-13
DATE 9 May 73 RUN 1419
FREQUENCY 5500 TIME 0900
POLARIZATION VH BISTATIC
OPERATOR SC
AGC-14F
1° Roll 1/2° PACER
TARGET INVERTED
330°
300°
270°
240°
210°
180°
150°
120°
90°
60°
30°
0

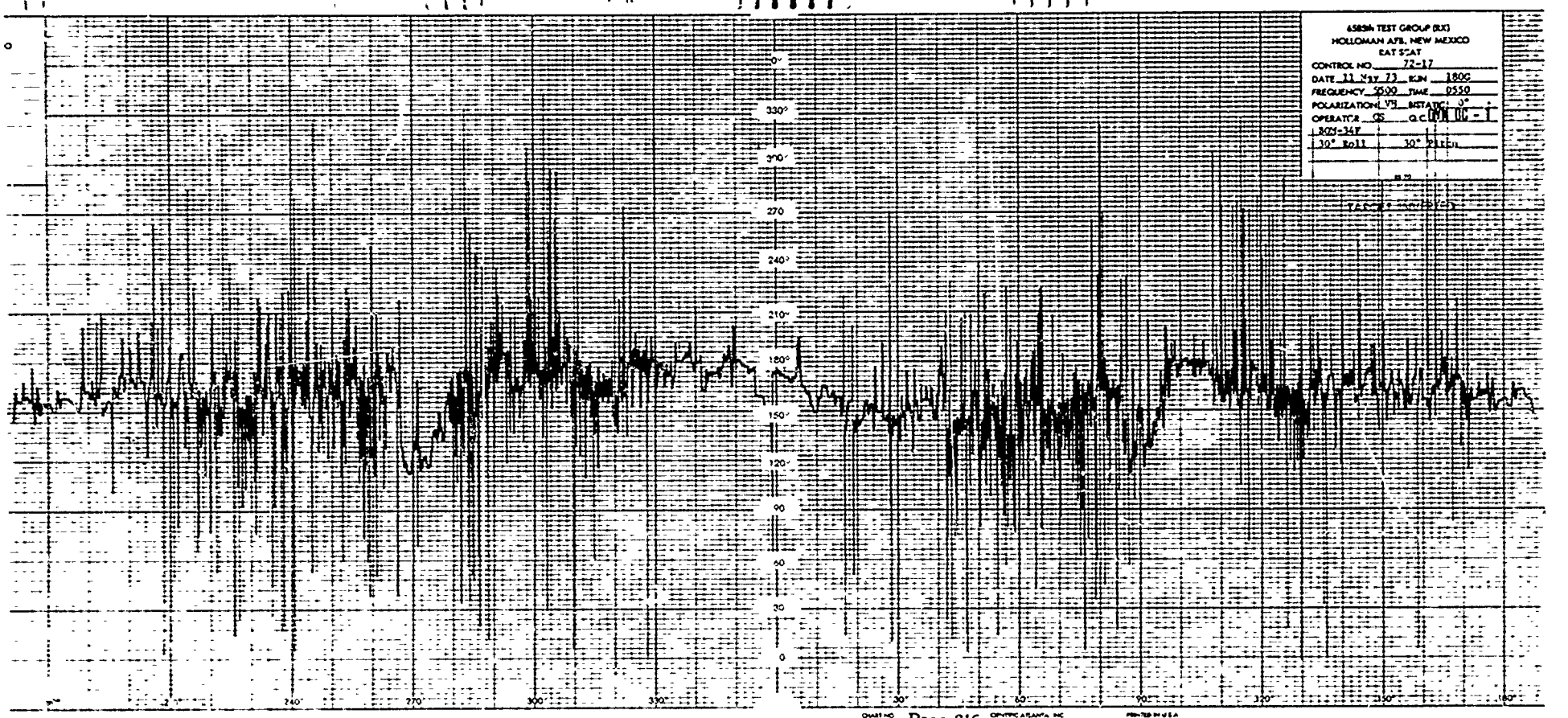

6585th TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO. 72-17
DATE 13 Sep 73 RUN 179A
FREQUENCY 9500 TIME 0510
POLARIZATION HH BISTAT C 3°
OPERATOR PM
30M-34P
30° Roll 30° Pitch
CALIBRATION REFERENCE LEVEL
TARGET (SURVEYED)
DYN OC - 1
40
30
20
10
0
-30
180°
210°
240°
300°
330°
0°
30°
60°
90°
120°
150°
180°

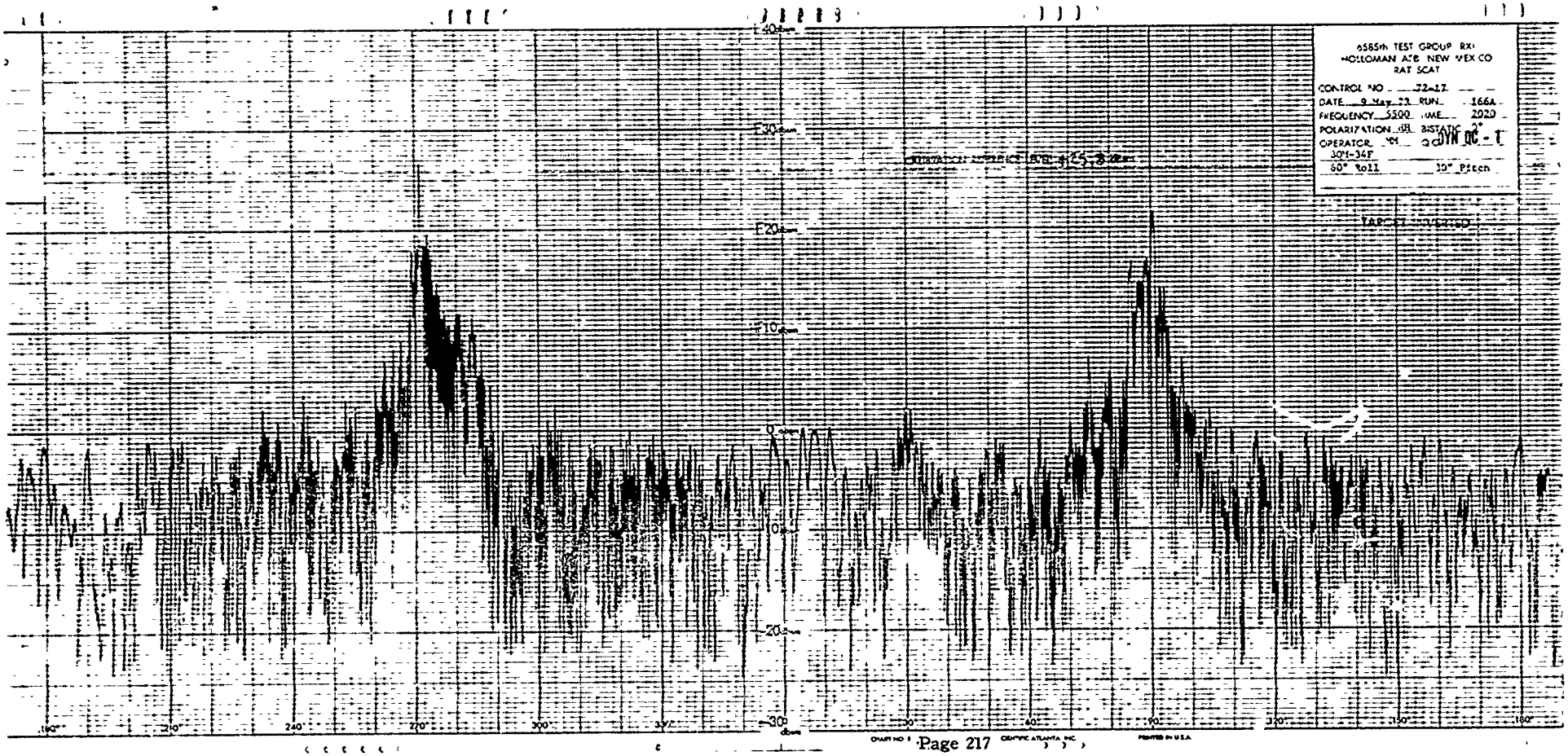

6585m TEST GROUP RAT
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO. 72-17
DATE 11 MAY 73
RUN 1775
FREQUENCY 5500
TIME 0510
POLARIZATION HH
BISTATIC 3°
OPERATOR RJT
CDYN DC - 1
808-3-F
30° Roll
30° Pitch
TARGET INVERTED
0°
330°
300°
270°
240°
210°
180°
150°
120°
90°
60°
30°
0°
90°
60°
30°
0°
330°
300°
270°
240°
210°
180°

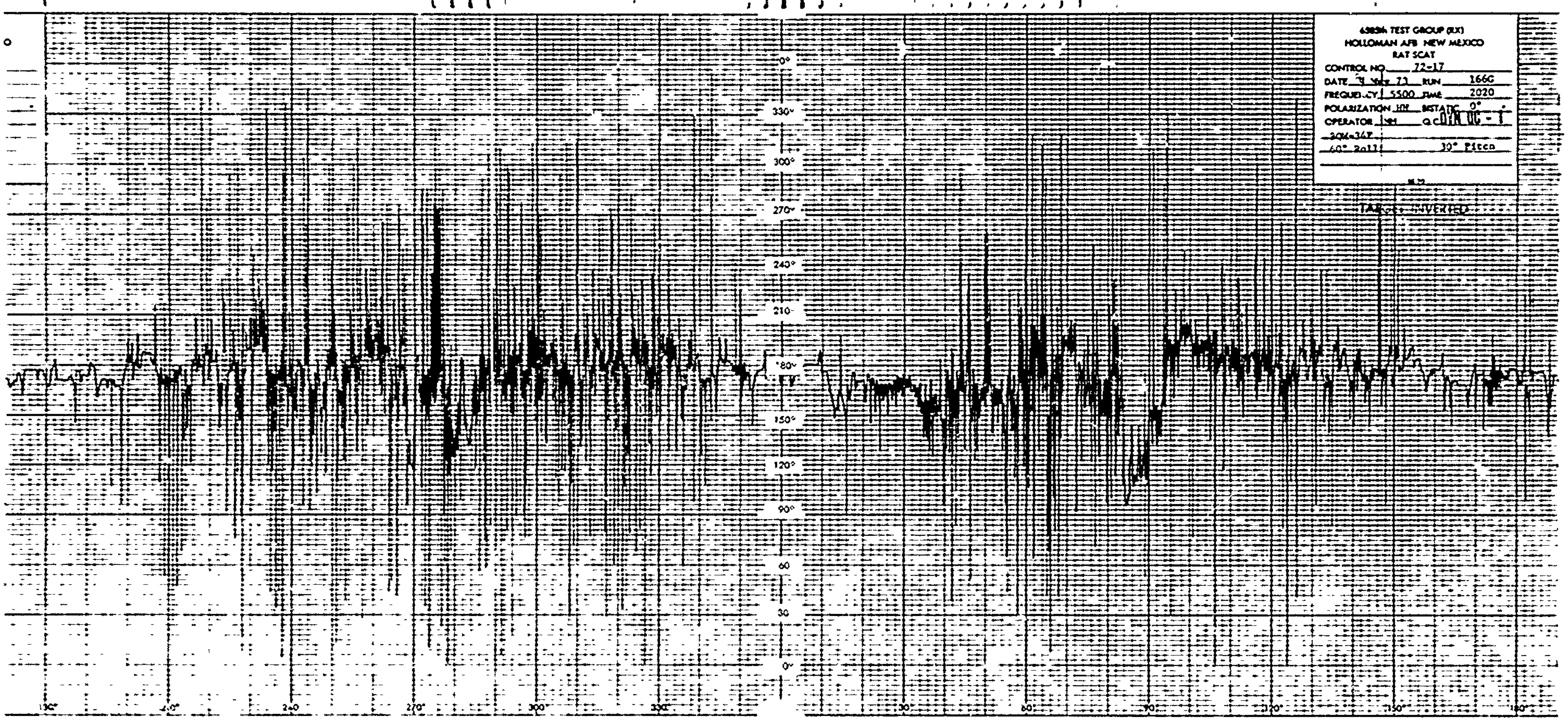

6585th TEST GROUP (DX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 11 May 73 RUN 132a
FREQUENCY 550M TIME 3725
POLARIZATION VV
OPERATOR
30M-34F
30° 3dB
DYN QC - 1
TARGET
-10 dBsm
-20
-30
0° dBsm
30°
60°
90°
120°
150°
180°
210°
240°
270°
300°
330°

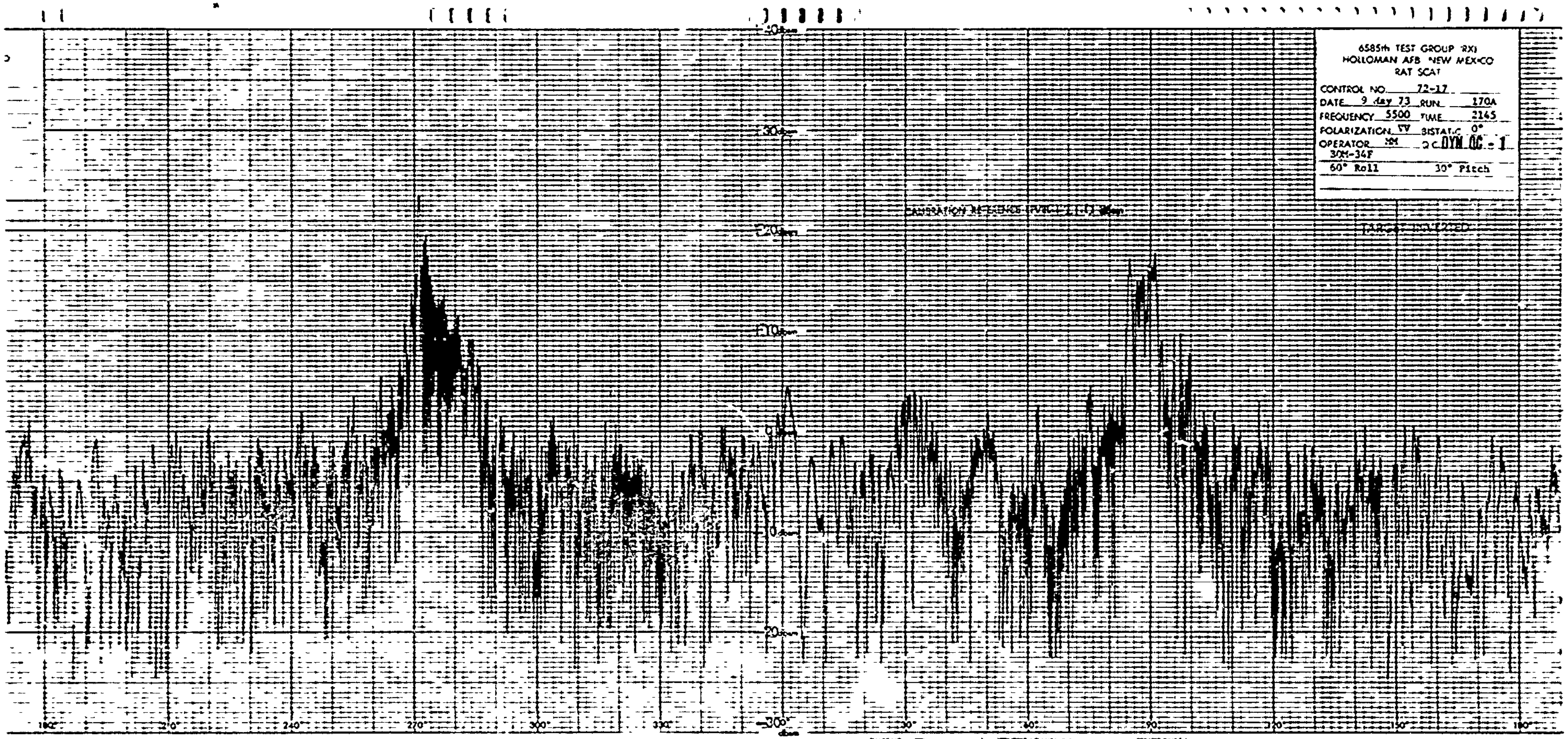

6585th TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO. 72-37
DATE 11 Mar 73 RUN 1825
FREQUENCY 5500 TIME 0725
POLARIZATION VV BISTATIC 0°
OPERATOR CC
RCH-34F
10° Roll
10° Pitch
TAPE RECORDED
0°
330°
300°
270°
240°
210°
180°
150°
120°
90°
60°
30°
0°

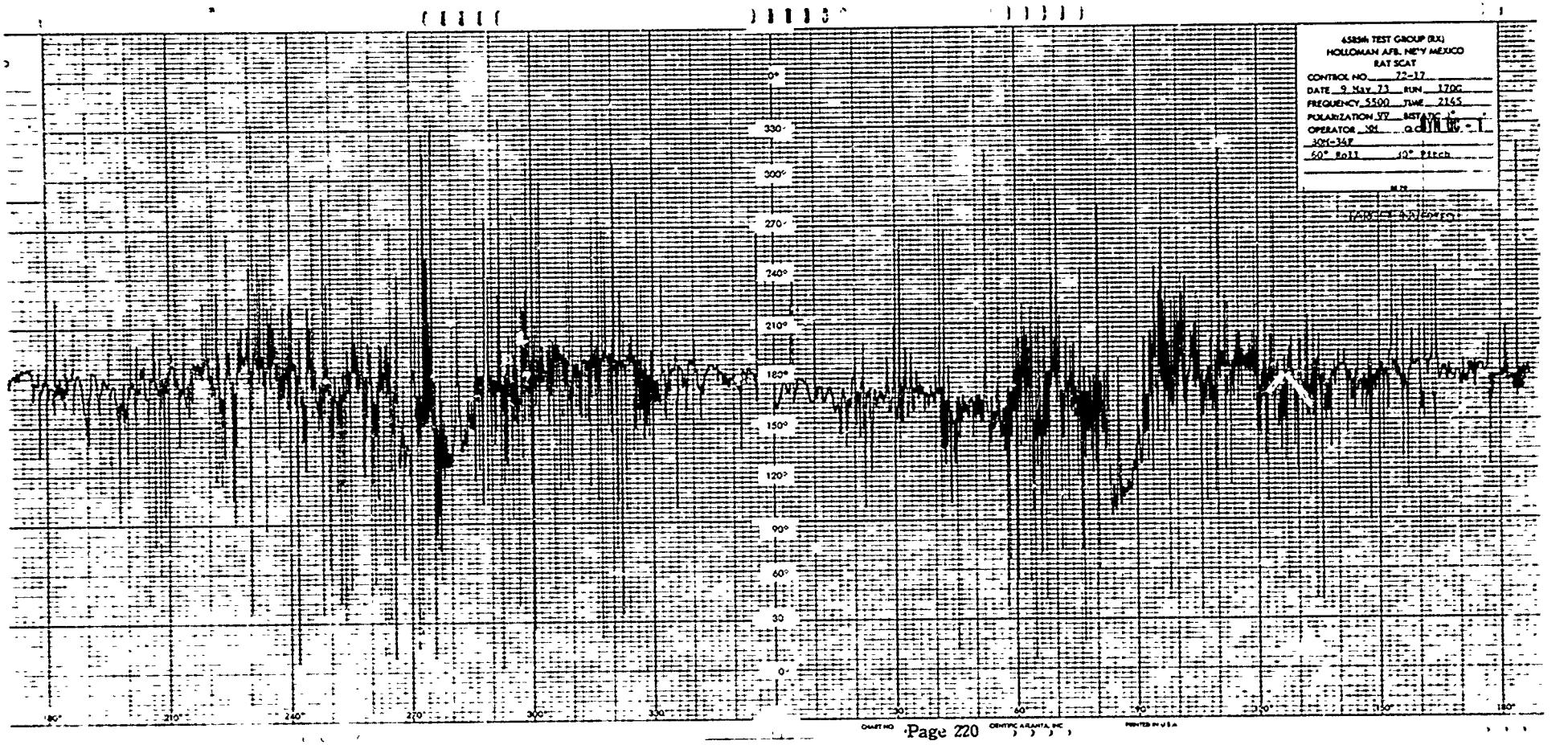

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 11 May 73 RUN 180A
FREQUENCY 5500 TIME 0550
POLARIZATION VH
OPERATOR CS
30°-36P
30° Roll 30° Pitch
TARGET INVERTED
DYN RG - 1
-40 dBsm
-30 dBsm
-20 dBsm
-10 dBsm
0 dBsm
-30 dBsm
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

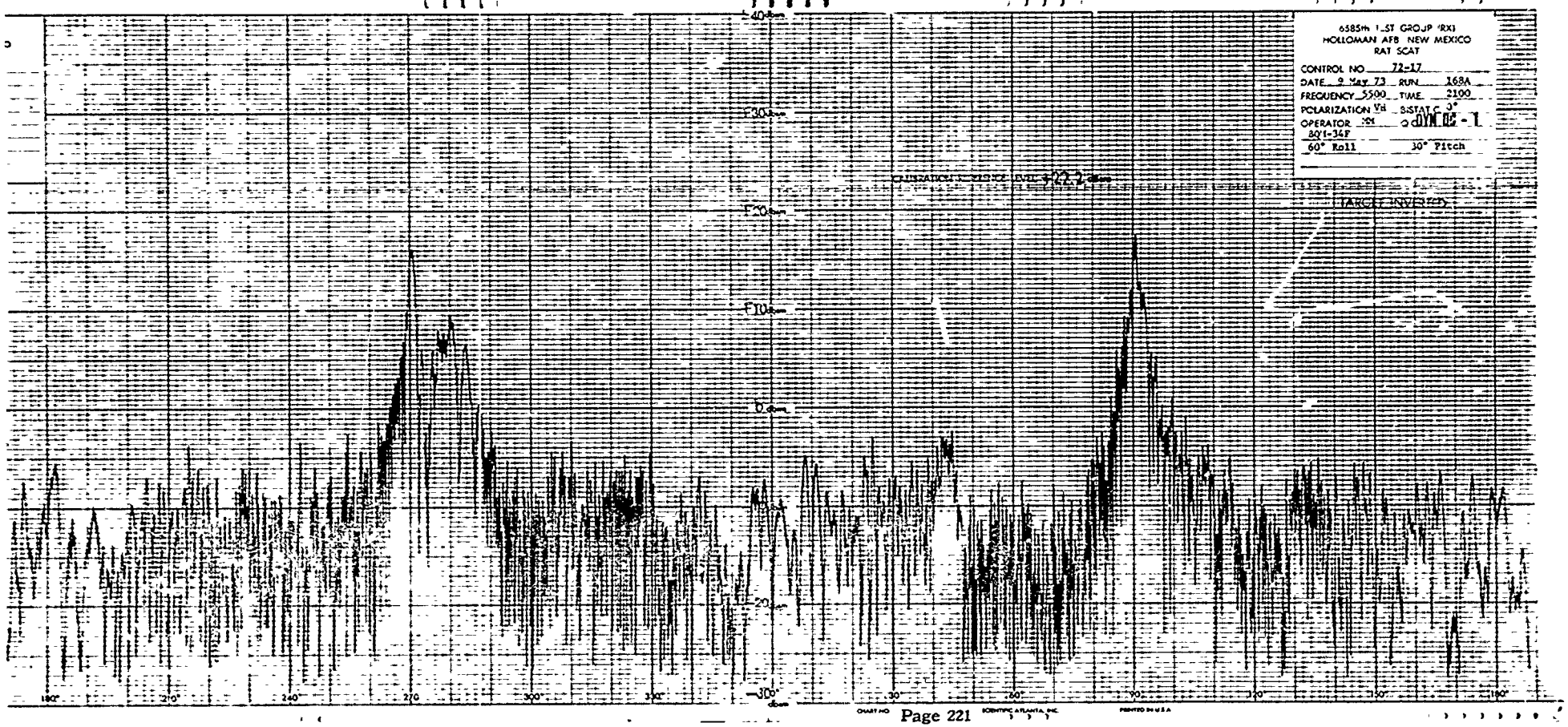

6585th TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
EAT S'AT
CONTROL NO 72-17
DATE 11 May 73 RUN 1806
FREQUENCY 5000 TIME 0550
POLARIZATION V/H BISTATIC 0°
OPERATOR GS G.C.
30° Roll 30° Pitch
330°
300°
270°
240°
210°
180°
150°
120°
90
60
30
0
240°
270°
300°
330°
30°
60°
90°
120°
150°
180°

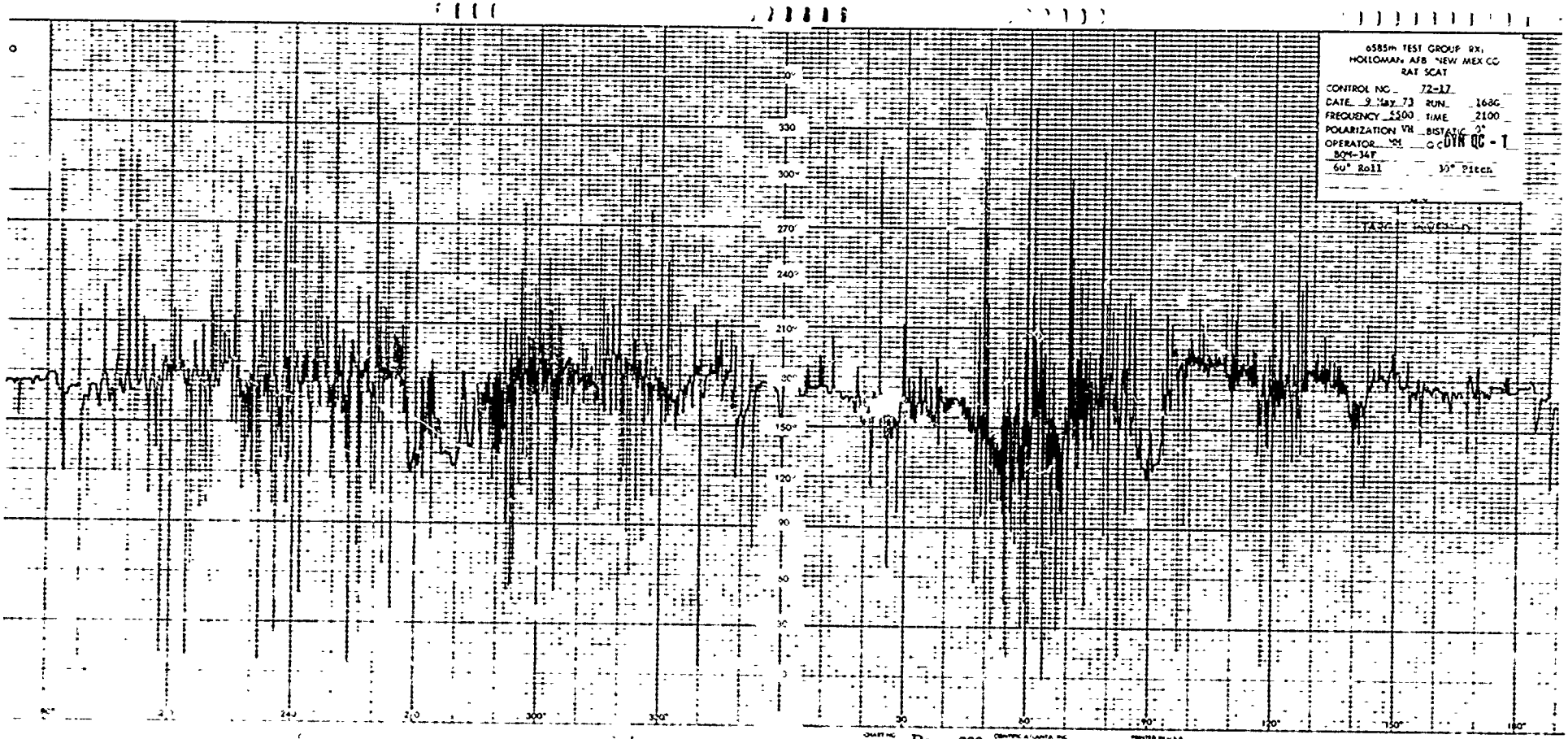

6585th TEST GROUP RX
HOLLOMAN AFB NEW MEX CO
RAT SCAT
CONTROL NO 72-17
DATE 9 May 73 RUN 166A
FREQUENCY 5500 TIME 2020
POLARIZATION HH BISTATIC 2°
OPERATOR
30ft-36F
60° roll 10° Pitch
TARGET UNDER TEST
-40dbsm
-30dbsm
-20dbsm
-10dbsm
0dbsm
10dbsm
20dbsm
-30
dbsm
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

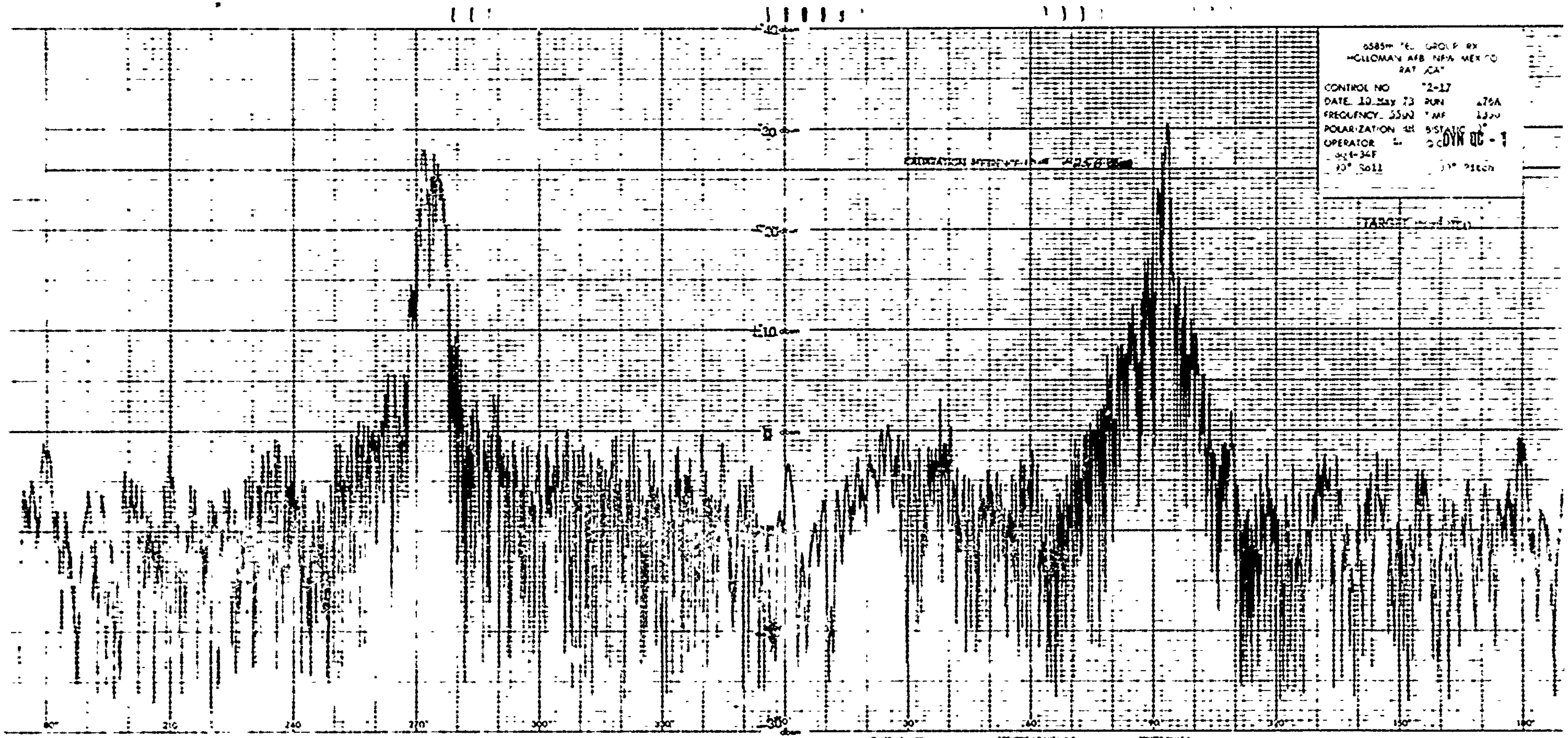

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
RUN 166G
FREQUENCY 5500
TIME 2020
POLARIZATION HH
BISTATIC 0°
TARGET INVERTED
30° Pitch
0°
330°
300°
270°
240°
210°
180°
150°
120°
90°
60
30
0°

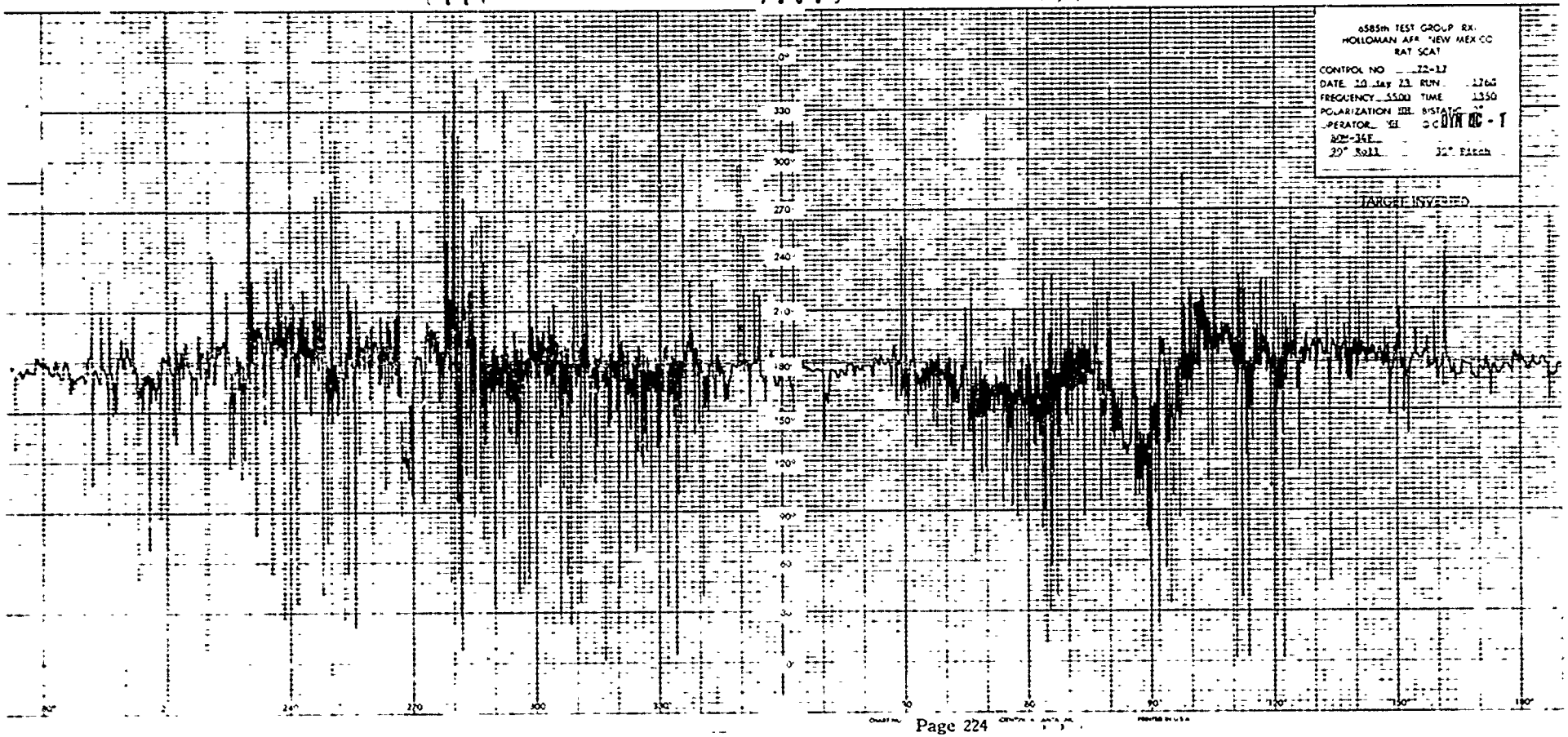

6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO. 72-17
DATE 9 day 73 RUN 170A
FREQUENCY 5500 TIME 2145
POLARIZATION VV BISTATIC 0°
OPERATOR
3/M-34F
60° Roll
30° Pitch
TARGET INVERTED
180°
210°
240°
270°
300°
330°
30°
60°
90°
120°
150°
180°

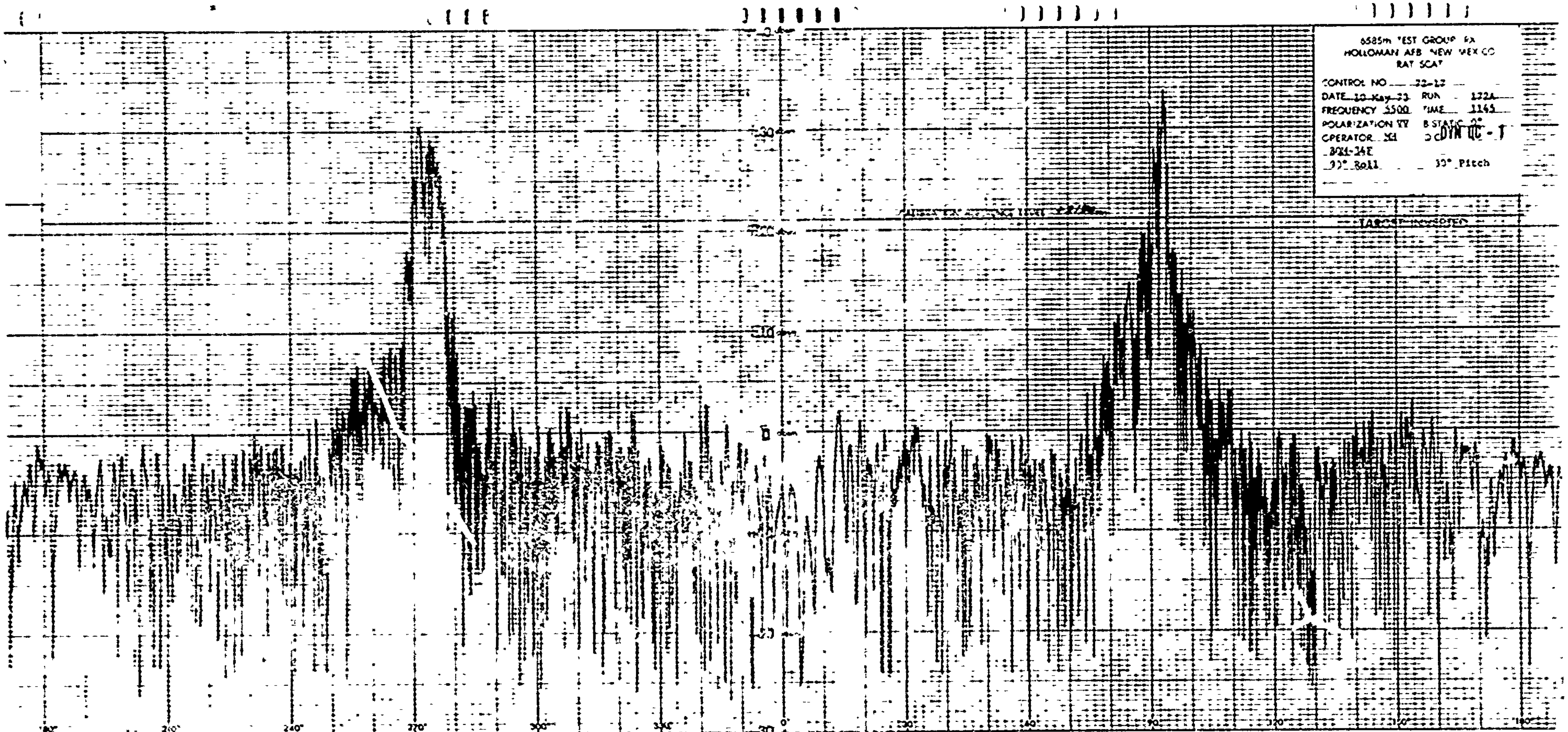

4585th TEST GROUP (RX)
HOLLOMAN AFB, NEW MEXICO
RAT SCAT
CONTROL NO. 72-17
DATE 9 May 73 RUN 1706
FREQUENCY 5500 TIME 2145
POLARIZATION VV BISTATIC
OPERATOR KH
30H-34F
60° Roll 40° Pitch
0°
330°
300°
270°
240°
210°
180°
150°
120°
90°
60°
30
0°
180°

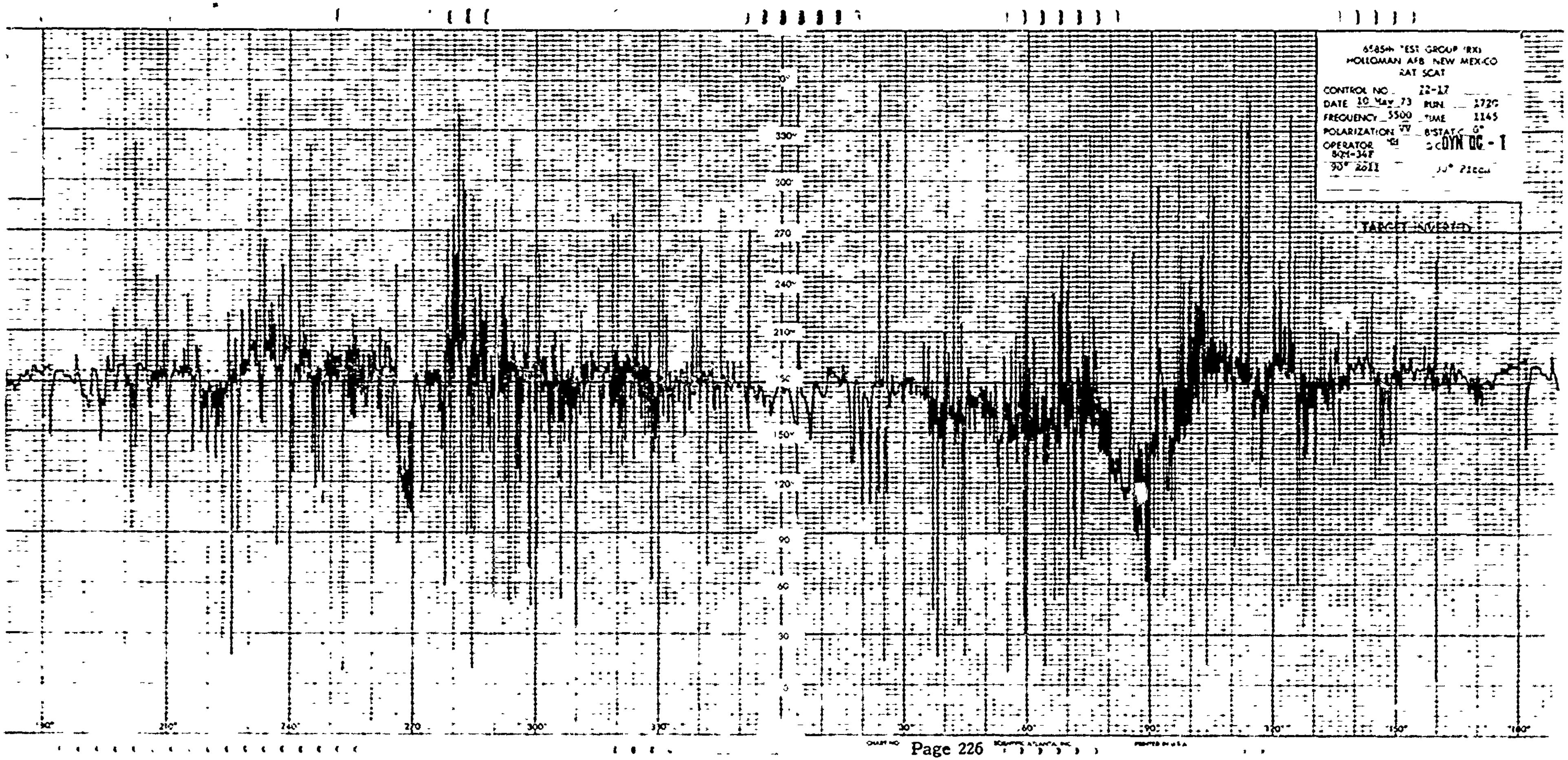

6585m 1.ST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 72-17
DATE 9 May 73 RUN 168A
FREQUENCY 5500 TIME 2100
POLARIZATION VH SISTAT C 3°
OPERATOR [illegible]
80'I-34F
60° Roll 30° Pitch
TARGET INVERTED
-40dbsm
-30dbsm
-20dbsm
-10dbsm
0dbsm
-20dbsm
-30dbsm
180°
210°
240°
270
300°
330°
30°
60°
90°
120°
150°
180°


6585th TEST GROUP RX,
HOLLOMAN AFB NEW MEX CO
RAT SCAT
CONTROL NO 72-17
DATE 9 May 73
RUN 1686
FREQUENCY 5500
TIME 2100
POLARIZATION VH
BISTATIC 0°
OPERATOR VH
CODE
BOM-34F
60° Roll
30° Pitch
DYN QC - 1
330
300°
270°
240°
210°
150°
120°
90
60
30
0
30
60°
90°
120°
150°
180°

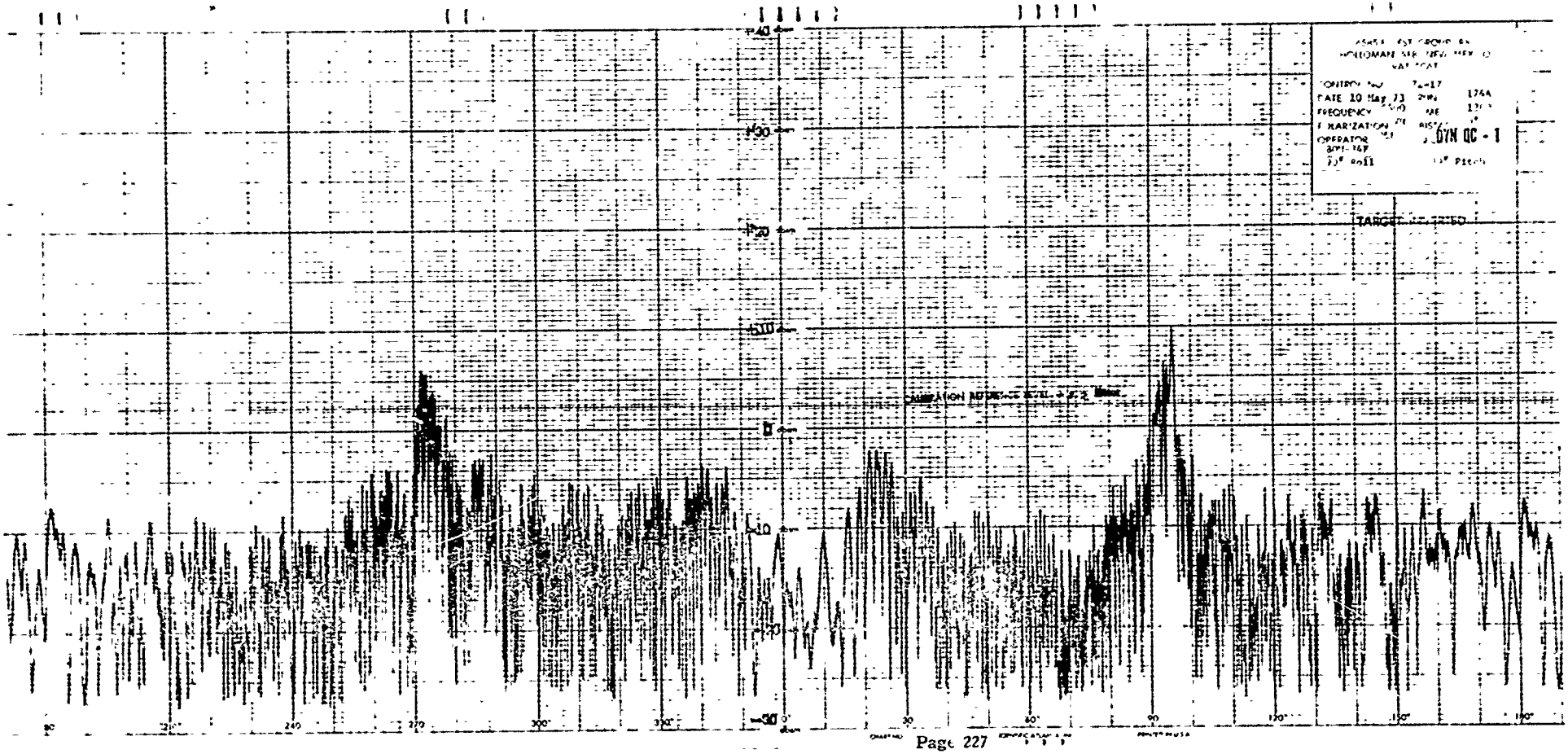

6585th TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
RAT "CAT"
CONTROL NO 2-17
DATE 10 May 73
FREQUENCY
POLARIZATION
OPERATOR
DYN QC - 1
TARGET
CALIBRATION
+40 dbsm
+30 dbsm
+20 dbsm
+10 dbsm
0 dbsm
-10 dbsm
180°
210
240
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°

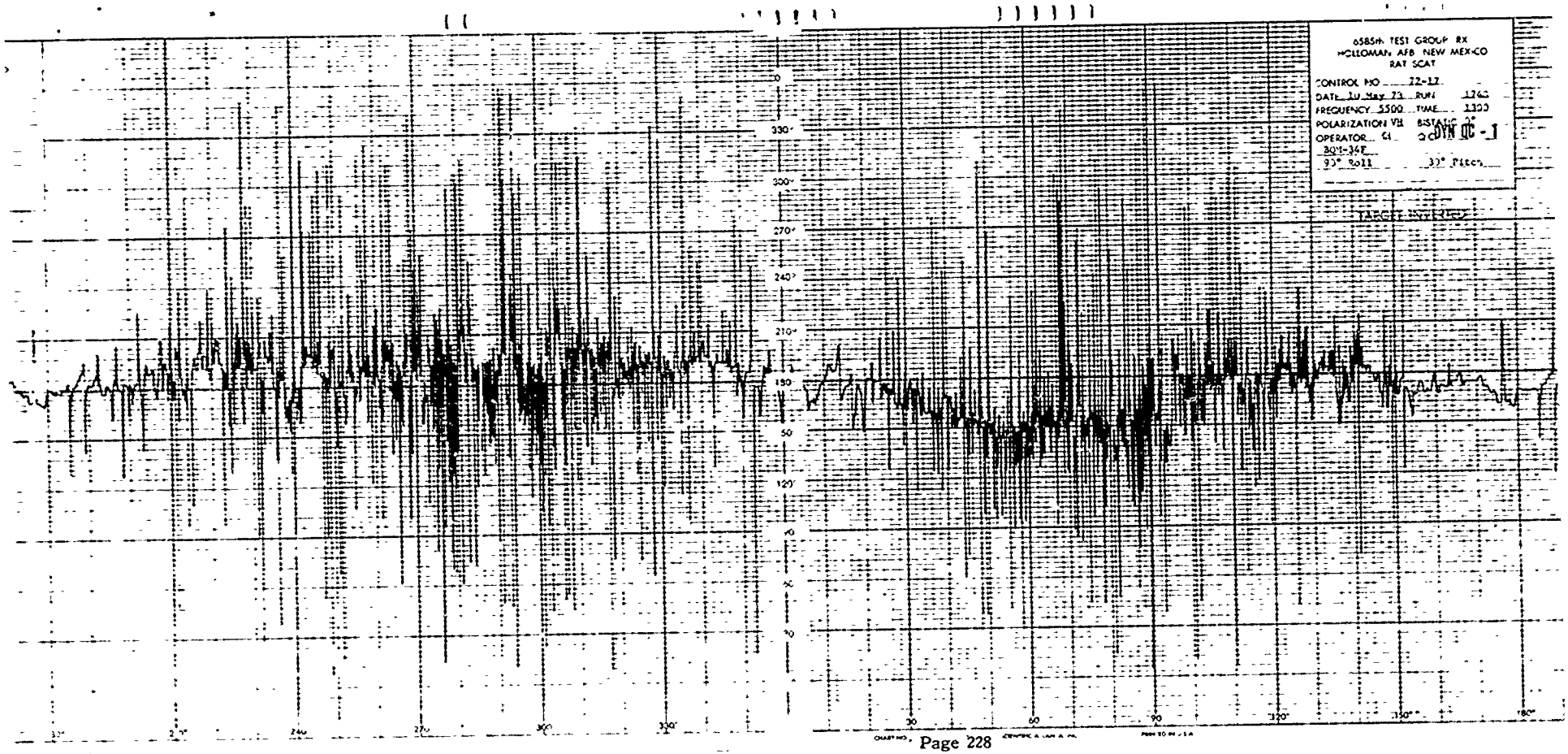

6585th TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 22-17
DATE 20 May 73 RUN 1265
FREQUENCY 5500 TIME 1350
POLARIZATION HH BISTATIC 0°
OPERATOR SI
AZM-346
29° Roll
32° Pitch
TARGET INVERTED
DYNAMIC - 1
330
300
270
240
210
180
150
120
90
60
30
0
270
300
330
0
30
60
90
120
150
180


6585th TEST GROUP FX
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 32-13
DATE 10 May 73 RUN 172A
FREQUENCY 5500 TIME 1145
POLARIZATION VV B STATIC 0°
OPERATOR
DYN QC - T
90° Roll 30° Pitch
TARGET INVERTED
30
20
10
0
30
180°
210°
240°
270°
300°
330°
0°
30°
60°
90°
120°
150°
180°



6585th TEST GROUP (RX)
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO. 22-17
DATE 10 May 73
RUN 2720
FREQUENCY 5500
TIME 1145
POLARIZATION VV
BISTATIC 0°
OPERATOR
BQM-34F
90° ROLL
CDYN QC - 1
TARGET INVERTED


DYN QC - 1
TARGET
+40
+30
+20
+10
0
-10
-20
-30


6585th TEST GROUP RX
HOLLOMAN AFB NEW MEXICO
RAT SCAT
CONTROL NO 22-12
DATE 10 May 73 RUN 1245
FREQUENCY 5500 TIME 1300
POLARIZATION VH BISTATIC 2°
OPERATOR GL
30°S-34E
93° Roll 33° Pitch
TARGET HEADING
0
330°
300°
270°
240°
210°
150
50
120°
90
30
60
90
320°
350°
80°

APPENDIX A
SITE INTRODUCTION

1. GENERAL

RAT SCAT is a static ground plane radar cross section measurement site, located on Alkali Flats near Holloman Air Force Base, New Mexico. It is authorized by the DOD for use by governmental agencies. It is under the auspices of the 6585th Test Group, Air Force Special Weapons Center, Kirtland Air Force Base, New Mexico.

A ground plane range utilizes radar energy reflected from the earth as well as radar energy traveling directly to the target through the atmosphere. When the antennas and target are adjusted to proper heights, coherent phase addition of these electromagnetic waves into a flat wave front, enhances the system sensitivity. Radar returns from objects near the earth's surface are reduced thus suppressing target area interference. Target area interference is reduced further through the use of special polyfoam support columns, radar absorptive materials (RAM), and rotators located below the earth's surface (in pits).

Pulsed transmitters are employed to enable utilization of the range gated receiving system, which can selectively measure radar returns from the target area or the range displaced transfer standard. Background interference outside the target range is eliminated by range gating. Operation without background cancellation is therefore practical.

2. CAPABILITIES

The RAT SCAT electronic equipment and controls are housed in a permanent building. Three separate range lengths (458 feet, 1158 feet, and 2458 feet) are provided for range variation as shown in Figure A-1. This allows the use of convenient antenna and target heights while satisfying the far field criterion for most targets. (Special 40-foot antenna towers are attached to the building for antenna height positioning.) Further versatility is provided by two mobile equipment vans, one for monostatic range length variation and one for bistatic measurements. A duplicate set of control and data consoles in the main building enables simultaneous operation of any two of the three ranges. A summary of the RAT SCAT characteristics is contained in Table A-1.

3. CALIBRATION

The normal method of calibration at RAT SCAT is to mount a primary standard (precision sphere) scatterer with a known radar cross section and record the corresponding signal level. Then the return from another secondary standard (corner or Luneberg lens) scatterer

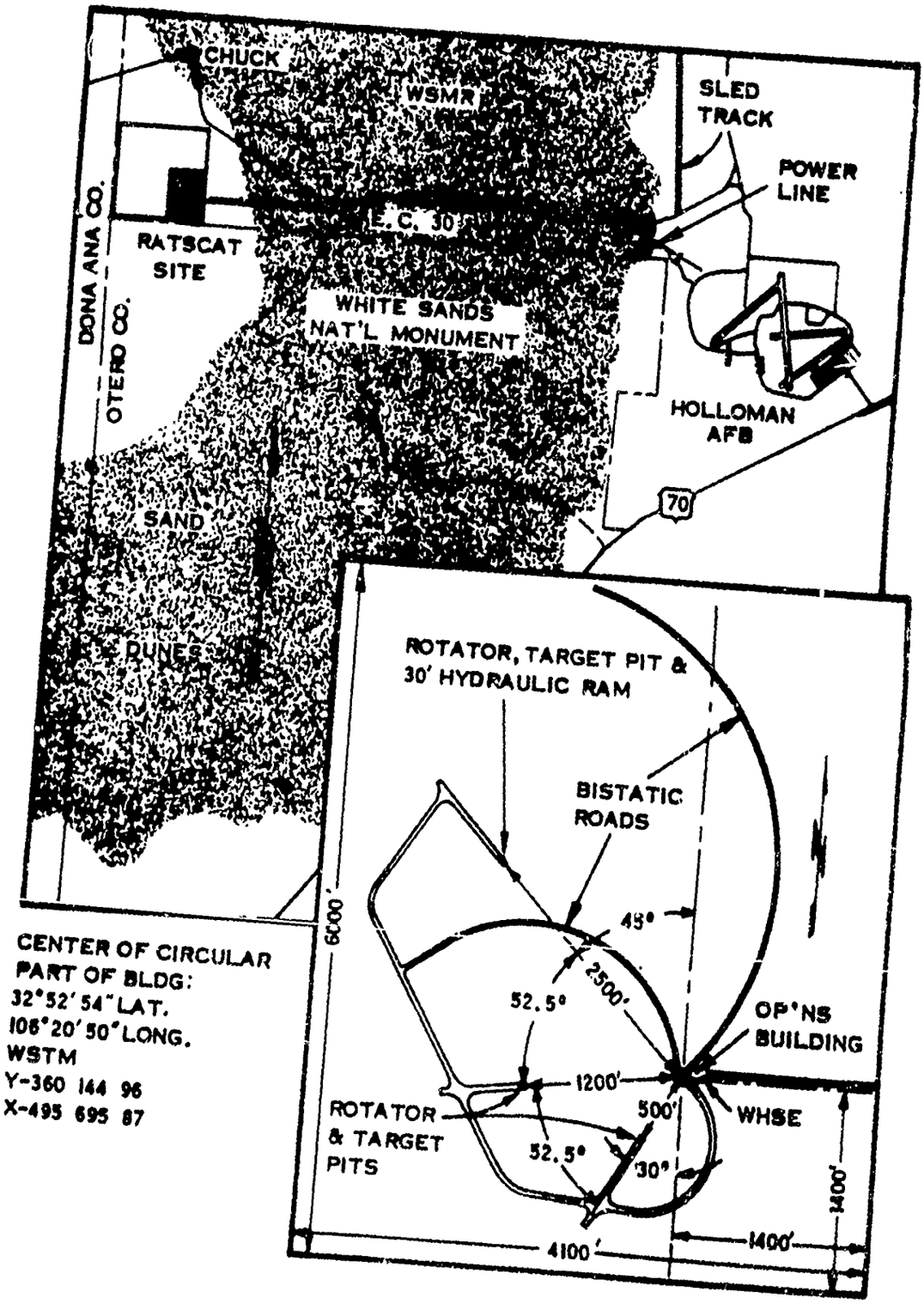


Figure A-1 MAP OF RAT SCAT SITE

TABLE A-1

RAT SCAT CHARACTERISTICS OF ELECTRONIC EQUIPMENT

Power Output	1 KW nominal bands 1 through 8, 25 KW nominal Ku, Ka bands
Pulse Width	0.1 to 1.0 microsecond
Pulse Repetition Frequency	500 to 5000 pps
No. of Receiving Systems	Two per band, (one monostatic and one bistatic)
Receiver Minimum Detectable Signal	-94 dbm nominal
Receiver Bandwidth	2 or 10 Mhz (selectable)
Range Gate Width	0.1 to 1.0 microsecond (50 to 500 feet)
Dynamic Range	70 db
Linearity	$\pm$0.5 db
Equipment Stability	0.1 db/hour (Average)
Analog Data Format	Polar and rectangular plots of cross section, glint and phase vs aspect angle
Digital Data Format	7 or 9 track magnetic (see Appendix C)
Antennas	1, 2, 3, 4, 6, 10, and 16 foot parabolic dishes (smaller and larger dishes available for special tests)
Antenna Feeds	Linear and circular horns with VSWR less than 2.0 to 1.0
Polarization	Horizontal, vertical, circular, elliptical in any transmitting and receiving configuration.
Background Level	As low as -80 dbsm (frequency dependent)
Background Reduction	Tuned columns and vector subtraction by using phase and amplitude measurements to reduce background by 20 db
Phase Measurement	Unique RAT SCAT capability for vector subtraction or scattering matrix applications
Azimuth Resolution	0.1 or 0.01 degree as applicable
Maximum Target Weight	40,000 pounds
Target Size	Greater than 60-foot length
Bistatic Capability	Primary ranges of 458 , 1158 , and 2458 feet for 0 to 160 degree bistatic angle
Frequency Coverage	100 to 18,000 MHz continuous, Ku, Ka bands and 95 GHz

Band 1 - 100 to 250 MHz
Band 2 - 250 to 500 MHz
Band 3 - 500 to 1000 MHz
Band 4 - 1000 to 2000 MHz
Band 5 - 2000 to 4000 MHz
Band 6 - 4000 to 8000 MHz
Band 7 - 8000 to 12,000 MHz
Band 8 - 12,000 to 16,000 MHz
Ku, Ka bands;
95 GHz

Range Length 300 feet minimum

Building/Pit 1 - 458 ft
Building/Pit 2 - 1158 ft
Building/Pit 3 - 2458 ft
Monostatic Van/Pits 1, 2, or 3 - variable range length

displaced in range is recorded as a transfer standard. Both the precision standard return and the transfer standard return are recorded on the same plot. Thereafter, radar cross section calibration is determined by referencing the transfer standard return for every run. Thus every run is recalibrated. The comparisons of primary and transfer standards accomplished before and after each measurement series are identified respectively as calibration and post-calibration. If the direct ratio of primary to secondary readings is not maintained before and after the measurement series, then all runs between are invalid and must be repeated.

The calibration reference level marked on each data plot is related to the transfer standard level. This reference level may under controlled conditions differ from the actual transfer standard signal level since precision calibrated attenuation is sometimes inserted in the receiver line. When such attenuation is inserted, returns from the transfer standard are reduced to a level compatible with the scale used for the target measurements. The 70 db dynamic range of the plot is placed to include the range of returns expected from the vehicle being measured. In some cases two runs are necessary to be plotted for direct overlay to include the dynamic range of the vehicle if it exceeds 70 db. Calibration plots are included with the target data when requested by the user.

The sphere calibration plots will not necessarily be straight lines. If the background return is within 20 db of the sphere return, for example, a variation in sphere return of approximately $\pm$ 1db can result. For calibration the sphere is intentionally placed at least 1/2 wavelength off the center of table rotation to insure sufficient phasing with the background return. The average sphere return is then chosen for a calibration level. This avoids the peak errors involved with coherent addition of sphere return and background return and allows the minimum errors involved with non-coherent addition of the returns. This is indicated in Figure A-2.

4. OPERATING PROCEDURES

The following step-by-step procedure is standard in obtaining monostatic radar cross section measurements after frequency, feeds, antennas, antenna height, target height, and pit (range length) have been chosen:

1. Calibration - As described in previous section.

2. Horizontal and vertical probes (field strength measurements at the target area) - Horizontal probes at the target area have been shown to be redundant for azimuthal boresighting. For this reason, these probes are taken only upon request for examination of near field effects.

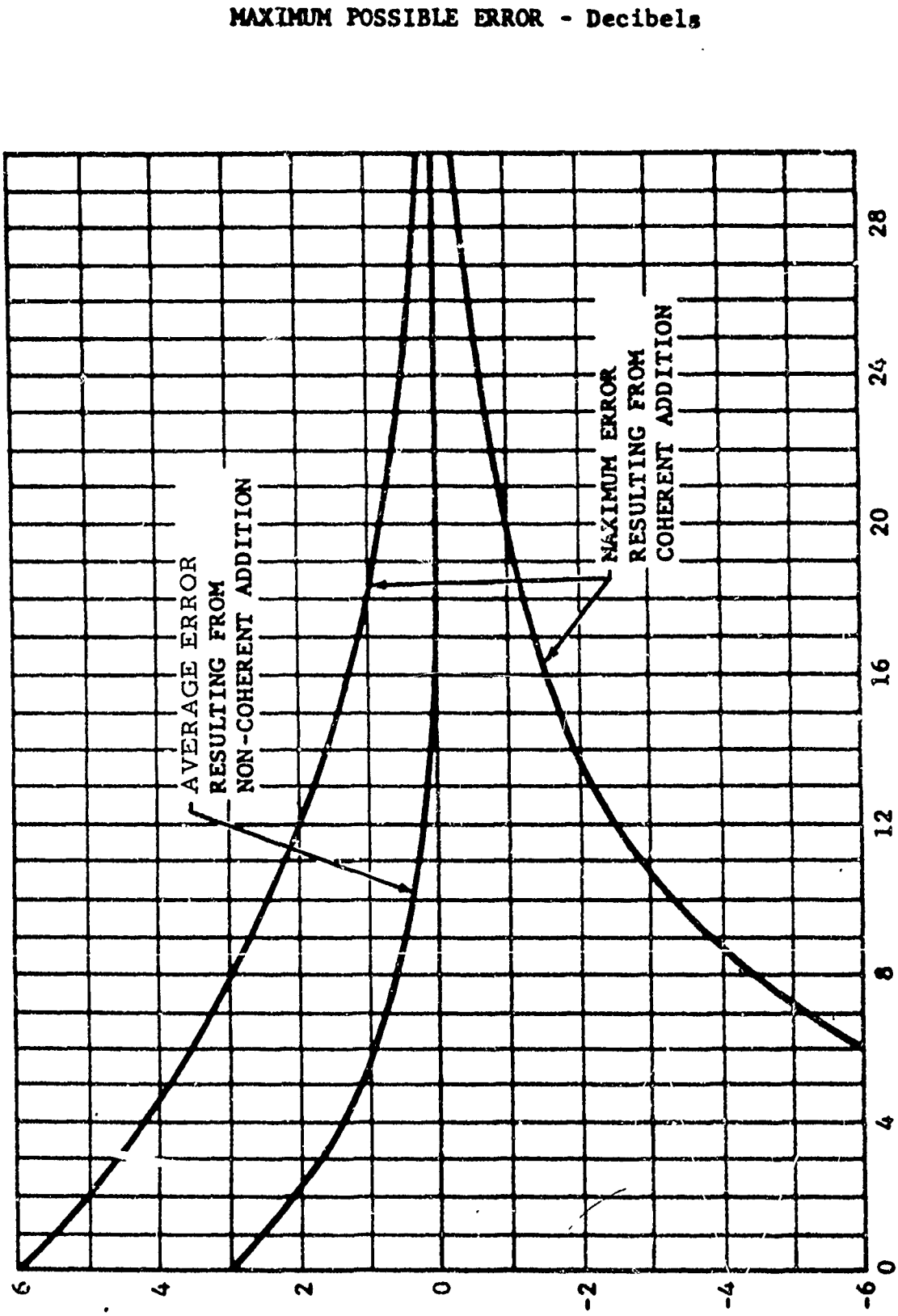


Figure A-2 PLOT OF ERROR INDUCED BY BACKGROUND INTERFERENCE

Vertical probes are taken at the target area to determine power variation as a function of target height. If necessary, antenna height is varied to obtain an acceptable vertical probe which then necessitates a new calibration.

3. Background - The background level with the target mount in place is measured in each polarization to be used.

4. Measurement - The measurement is made with the vehicle in the position previously occupied by the primary standard.

5. Calibration - The primary calibration is repeated to verify calibration (post calibration).

APPENDIX B
TARGET ORIENTATION AND DATA FORMAT

1. COORDINATE SYSTEM

The coordinate system described herein has been adopted as a standard for RAT SCAT operations. The system is referenced both to the vehicle being measured and to the measurement site.

a. Vehicle Reference

A three-axis system, referenced to an arbitrary vehicle, is illustrated in Figure B-1. In this system three mutually perpendicular planes (yaw, pitch, and roll) are passed through the vehicle so that the pitch and yaw planes mutually intersect on the longitudinal axis of the vehicle. These planes remain fixed with respect to the vehicle, regardless of vehicle rotation with respect to the radar or ground plane. The yaw plane, which includes the pitch axis and the roll axis, is numbered from 0 degrees to 360 degrees in a clockwise direction when the vehicle is viewed from the above. The nose-on aspect corresponds to 0 degrees, the starboard side of the vehicle corresponds to 90 degrees, and the port side to 270 degrees. The pitch plane, which contains the roll axis and the yaw axis is numbered from 0 degrees to ± 180 degrees; the + 90 degree point is below the center line, and the - 90 degree point is above the center line. The roll plane contains the yaw axis and the pitch axis. It is numbered from 0 degrees to 360 degrees, and the numbers increase in a counterclockwise direction when the vehicle is viewed from the rear.

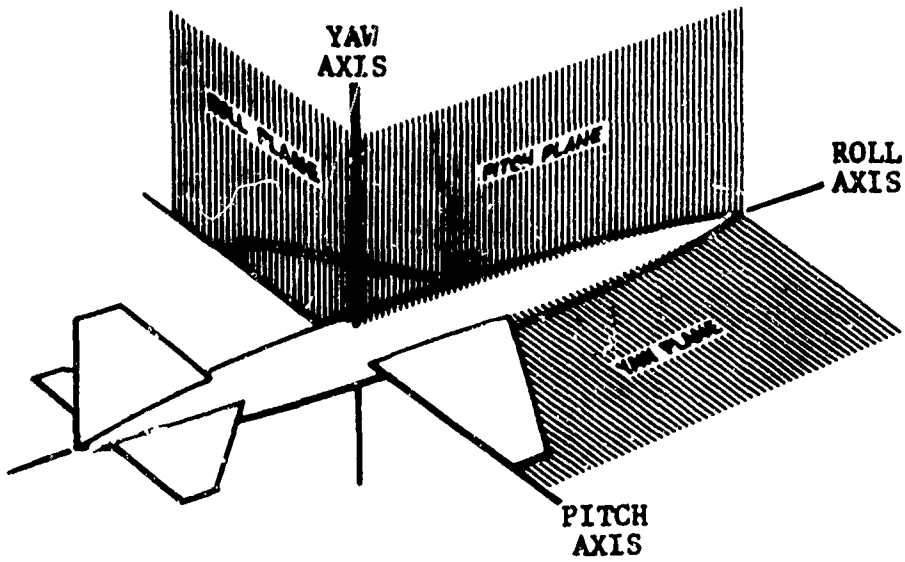
b. Site Reference

As previously stated the coordinate system is fixed with respect to the vehicle. It is referenced to the site by means of three index marks. The exact value of any of the three angles is determined by noting the value of the vehicle coordinate opposite the index marks. Index marks come from such devices as bubble levels, inclinometers and transits.

As illustrated in Figure B-2, the index for roll angles is normal to the axis of rotation. As illustrated in Figure B-3, the index for pitch angles is normal to the axis of rotation and in line with the apparent source of radiation. For measurements at the RAT SCAT Site, targets can be mounted to provide desired pitch and roll angles.

c. Coordinate System Tilt

For small targets another angle, tilt, can be utilized in recording useful data. This angle, equipment-limited to less than 15 degrees, is formed by the axis of rotation and the normal to the line of sight to the



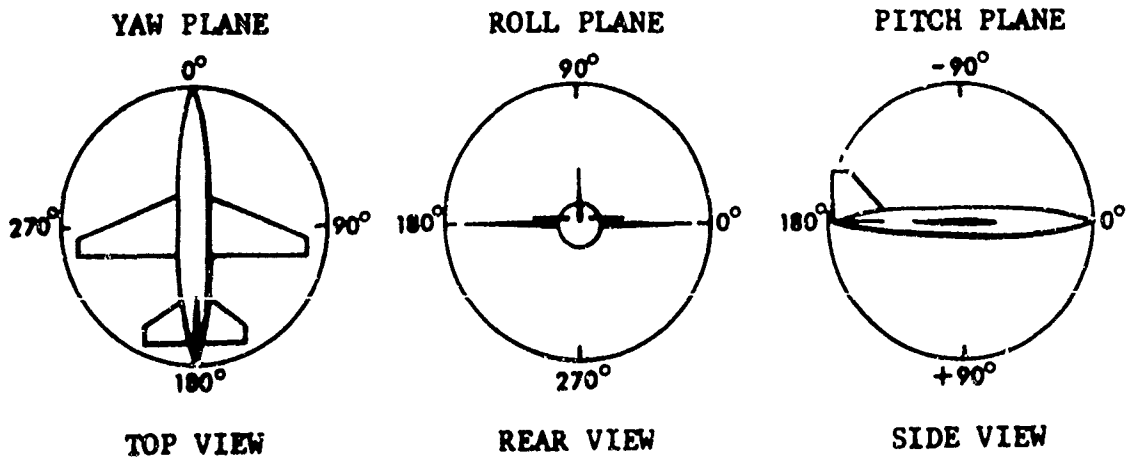
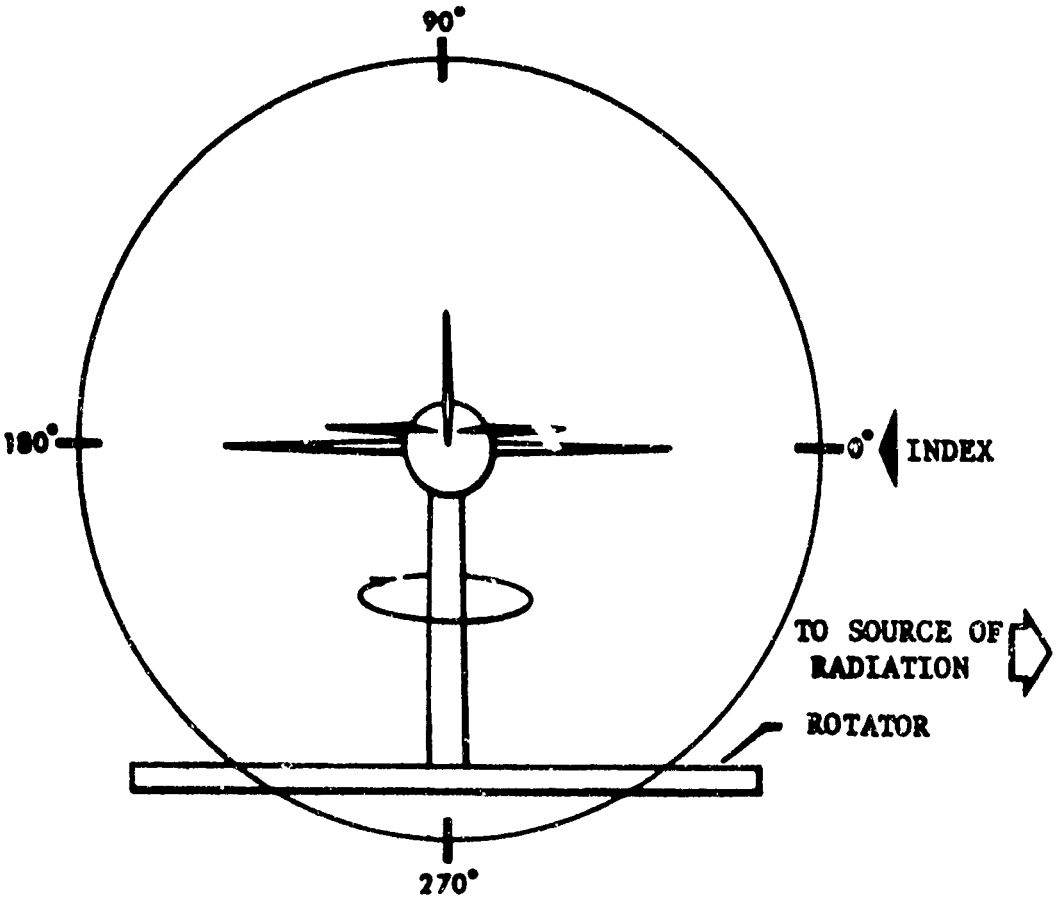
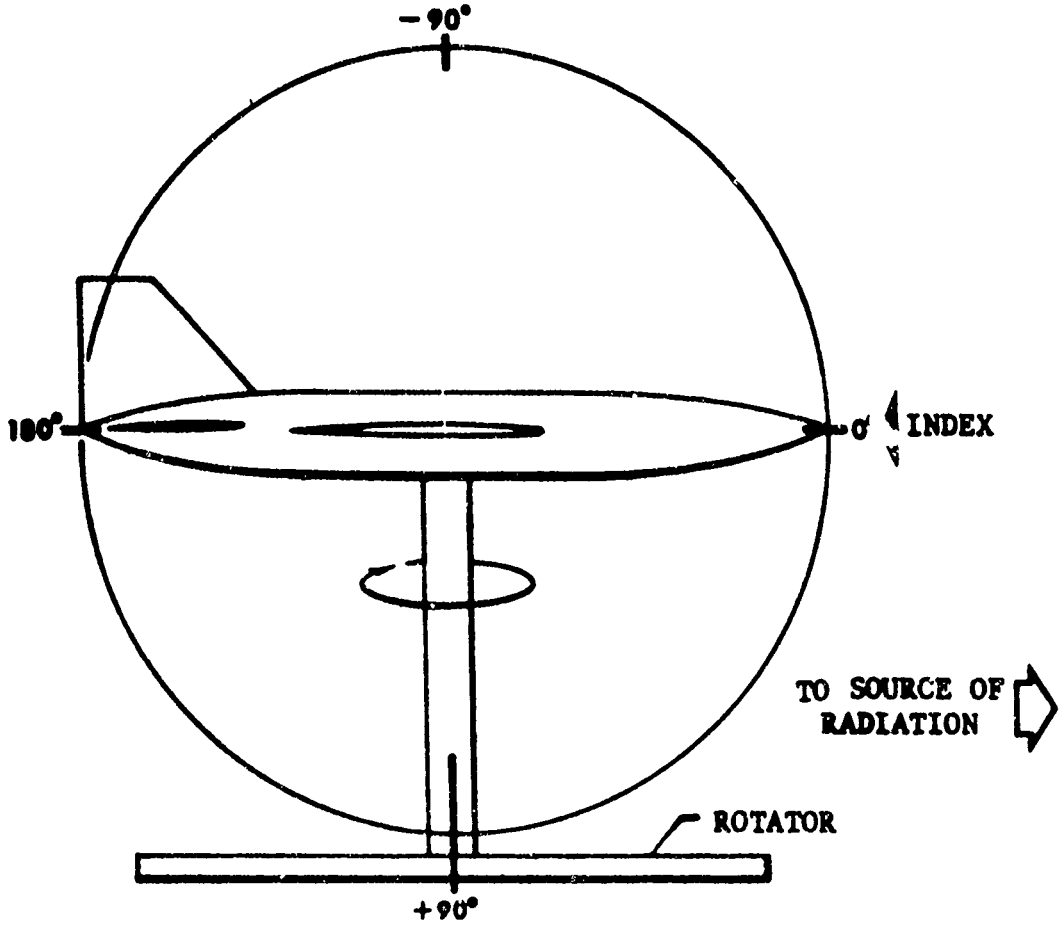


Figure B-1 VEHICLE COORDINATE SYSTEM



NOTE: The roll scale is fixed to the vehicle. The amount of roll is determined by noting the number of degrees opposite the index. Clockwise rotation of the target (when viewed from the rear) increases the roll angle.

Figure B-2 TARGET ORIENTATION - ROLL



NOTE: The pitch scale is fixed to the vehicle. The number of degrees of pitch is determined by noting the scale value opposite the index.

Figure B-3 TARGET ORIENTATION - PITCH

apparent source of radiation. Since, in a ground plane range, radiation can be considered to emanate from a point with zero height directly beneath the antennas, a zero-degree tilted axis of rotation is slightly off the geometrical vertical. This small deviation from the geometrical vertical is neglected in the following discussions.

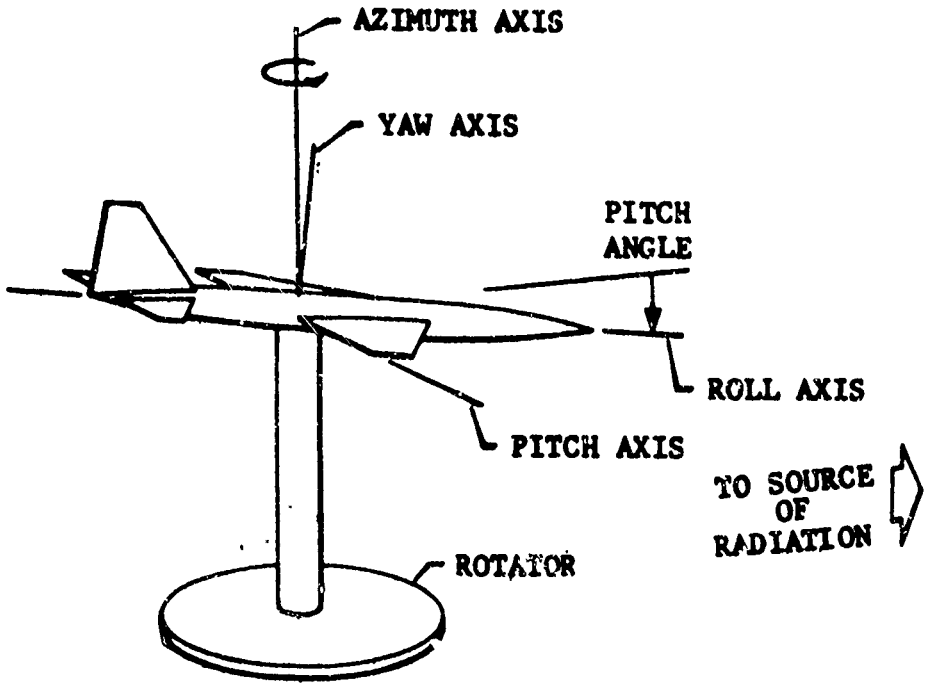
A target mounted with a pitch angle other than zero displaces the yaw axis from the vertical, but not the axis of rotation. The axis of rotation is displaced from the vertical only when non-zero tilt is employed. Tilting toward the radar is considered positive tilt and away from the radar is negative tilt. For monostatic measurements tilt will be measured in the vertical plane containing the line of sight between the radar and the target. The difference between pitch and tilt is shown in Figure B-4.

2. DATA FORMAT

Data recorders obtain azimuth angle information by means of precision synchro signals from the position of the rotating table. The line of sight from the antennas to the center of the rotator, as illustrated in Figure B-5, indexes azimuth angles. As used here the term azimuth refers to the position of the target rotator table. With zero degrees of pitch and roll, azimuth and yaw are identical. It is standard practice to turn the rotator in a clockwise (cw) direction as viewed from above. Consequently, the azimuth angle varies, for example from 180 degrees (tail-on) to 90 degrees (starboard-side) to 0 degrees (nose-on) to 270 degrees (port-side).

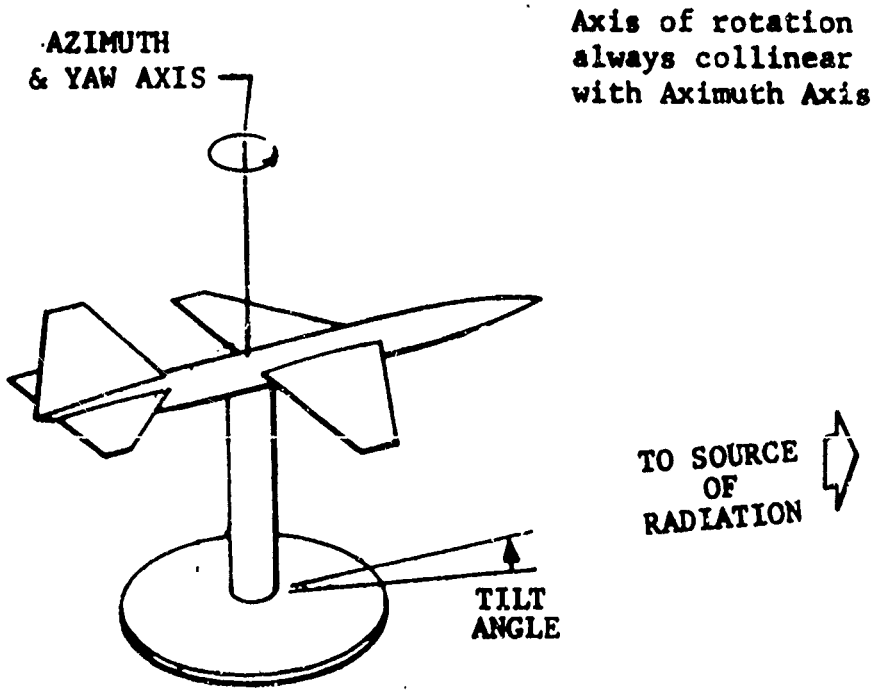
a. Polar and Rectilinear Plots

Essential information pertinent to each plot is contained in the information block located in the upper right hand corner of the rectilinear plots and in the second quadrant of the polar plots. Each rectilinear plot has the recording of the return from the left side of the vehicle on the left side of the plot, 0 degrees at the center, and the recording of the return from the right side of the vehicle on the right side of the plot; 180 degrees (tail-on) appears at the right and left extremeties of the plot, as shown in Figure B-6. Since the paper moves from left to right under the recorder pen, it should be noted that measurements are limited at 180 degrees in order to obtain continuous measurements on the recorder paper. The table on the polar recorder is rotated in the same directions as the target so the 90-degree point appears on the right side of the polar plot, the 270 degree point on the left, and the zero or 360 degree point at the top of the plot.



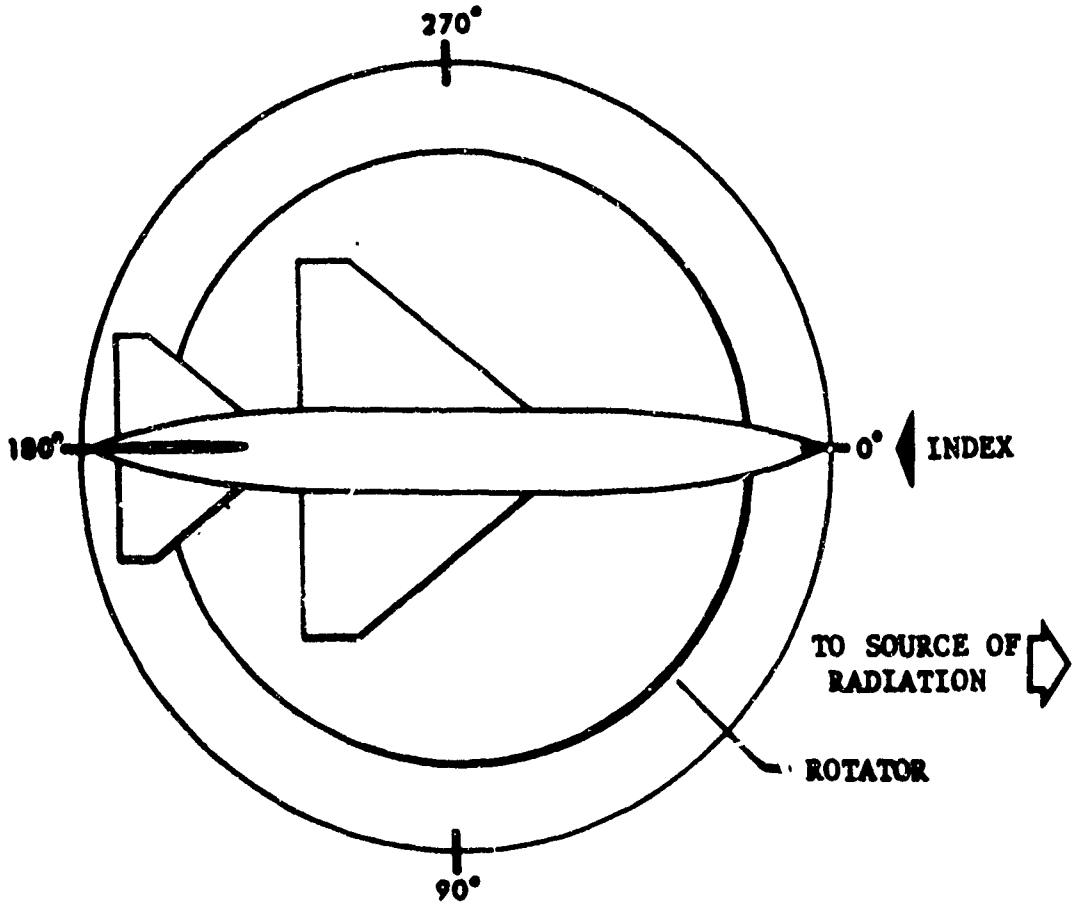
PITCH

NOTE:
Axis of rotation is always collinear with Aximuth Axis



TILT

Figure B-4 COMPARISON OF PITCH AND TILT ORIENTATIONS



NOTE: The azimuth scale is fixed to the target rotator. The azimuth value is determined by noting the value of the scale opposite the index mark as the rotator and scale revolve. The index is the line-of-sight from the radar antennas to the center of the rotator. (Azimuth angie data are transmitted to the data recorders by means of synchro signals.) The standard direction of rotation will be clockwise.

Figure B-5 TARGET ORIENTATION - AZIMUTH

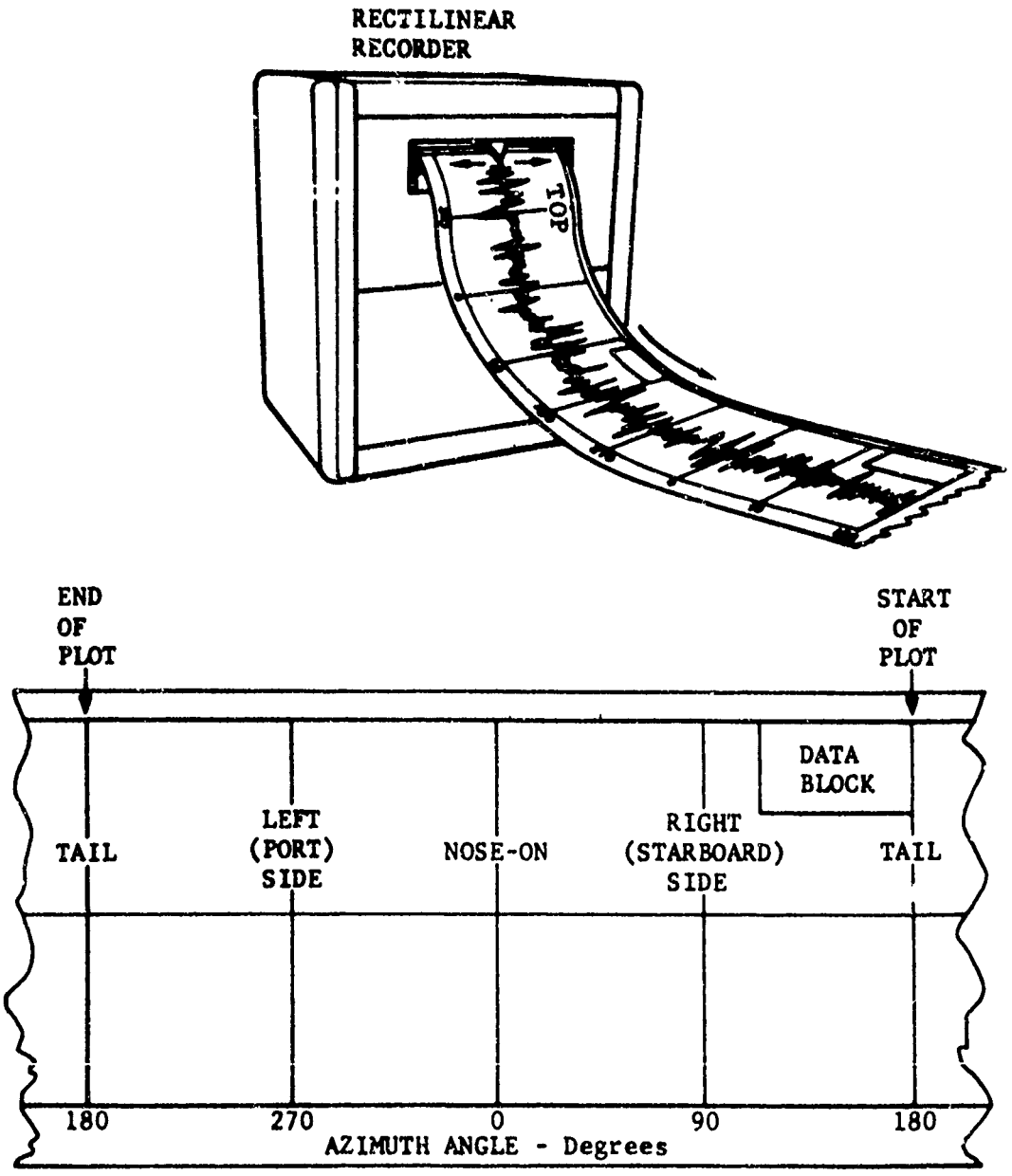


Figure B-6 FORMAT FOR RECTILINEAR PLOTS

APPENDIX C
DIGITAL DATA FORMATS L, M, AND N

RAT SCAT has the capability of supplying several types and formats of digital data. Edited magnetic tape formats L, M, and N as described herein are normally furnished to the user requesting digital data.

This appendix is not intended as a format specification, nor is it meant to restrict the data formats available to only those listed. It is intended solely as a guide for reference purposes.

The three formats are similar except for the presence or absence of a second dependent variable which is either phase or bistatic RCS amplitude.

Format	Type Data
L	Azimuth and Monostatic RCS
M	Azimuth, Monostatic RCS and Bistatic RCS
N	Azimuth, Monostatic RCS and Phase (or Glint)

Tapes are written in seven channels BCD card image. Each record contains 80 BCD characters. Azimuth is written in degrees, RCS in dBsm, and phase in degrees. All values contain signs and decimal points. The edited tapes are available in 200, 556, and 800 bits per inch recording densities.

Each tape may contain 40 runs (360 degrees of azimuth samples per run) or more depending on format, density, and user specifications. Each run is ended with an end of file mark (EoF). Each tape is ended with a double EoF.

The number of 80 character records per run depends on the azimuth increment, whether filler data is involved and the format used. The first record in each data run is a header constructed as follows:

Character	Information	Example	Format
1-4	Control Number	7307	A4
5-8	Blank	-	
9-12	Run Number	0015	A4
13-16	Blank	-	

Character	Information	Example	Format
17-20	Conversion Number*	-600	A4
21-24	Blank	-	
25-28	Bistatic Conversion*	-600	A4
29-32	Blank	-	
33-80	Alphanumeric Identification	RAT SCAT EDITED TAPE	A48

*RAT SCAT Use Only.

The data records contain four or six samples of data depending on format. The makeup of a sample for a format N tape is as follows:

Value	Format	Example
Azimuth (degrees)	F7.2	+272.20
RCS (dBsm)	F5.1	-25.5
Phase (degrees)	F5.0	+179.
Flag	A-1	I

The third item, phase, would be replaced by bistatic RCS for format M (F5.1) and would be absent for format L. The meaning of the fla is: Blank = good data, I = interpolated data, B= band data, H = hand edited data, and F = filler data. Data with a filler flag should be ignored.

Data records can be read with Fortran formats as follows:

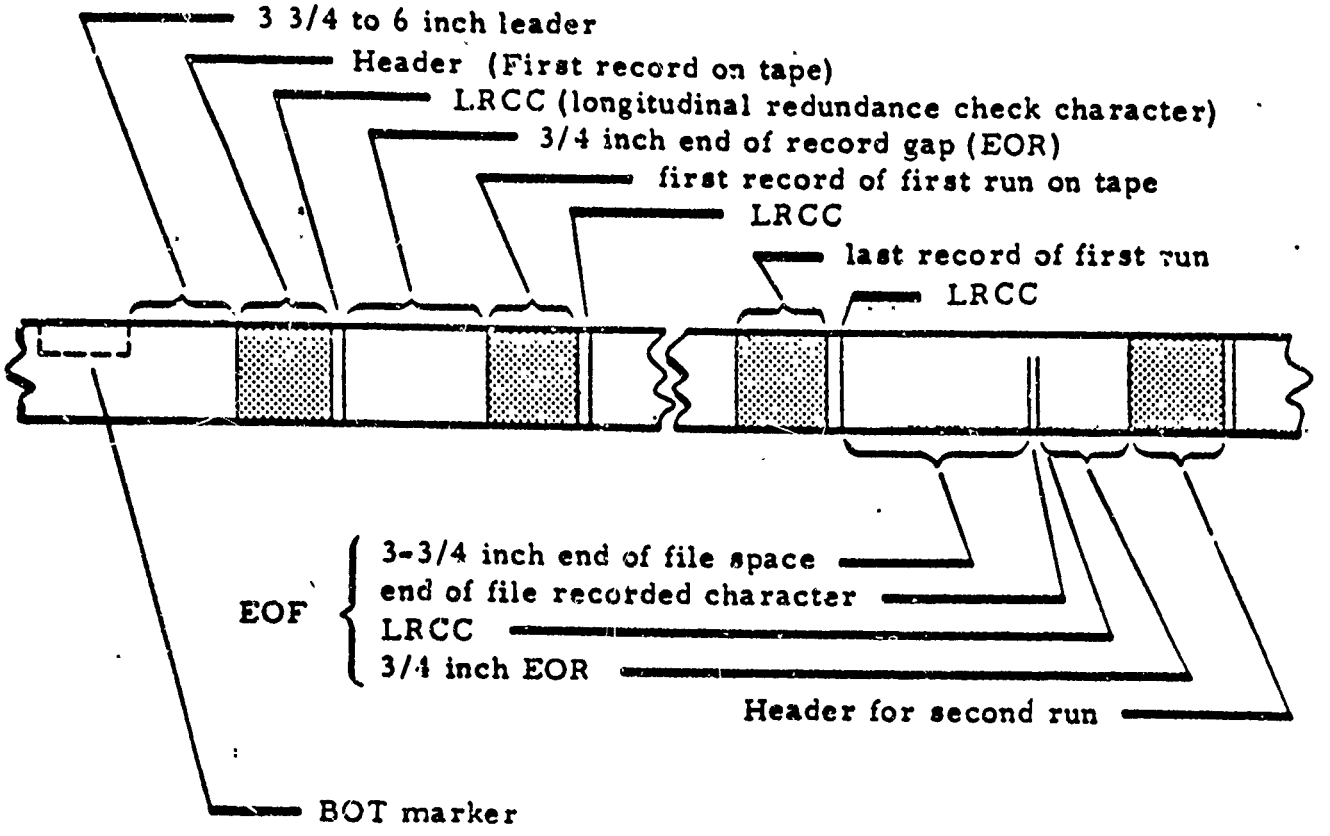
Format	Read Statement Format
L	Format (2(3(F7.2, F5.1, A1), X))
M	Format (4(F7.2, F5.1, A1, F5.1, A1, X))
N	Format (4(F7.2, F5.1, A1, F5.0, A1, X))

The azimuth angle in the first sample of a run is usually 180.00 degrees. The value decreases until 0.00 degrees is reached and thereafter goes from 359.9 degrees (for 0.1 degree increments) to 180.0 degrees.

Typical magnetic tape character codes are shown in Figure C-1 and the physical characteristic of a typical format, including EOF gaps, etc., is shown in Figure C-2.

CHARACTER	Track Identification						
	1	2	4	8	A	B	C (parity)
0		X		X			
1	X						X
2		X					X
3	X	X					
4			X				X
5	X		X				
6		X	X				
7	X	X	X				X
8				X			X
9	X			X			
Space (Blank)					X		X
Plus (+)					X	X	
Minus (-)						X	X
E.O.F.	X	X	X	X			
Dec. Point	X	X		X	X	X	X
I	X			X	X	X	
F		X	X		X	X	
B		X			X	X	X
H				X	X	X	X

Figure C-1 Magnetic Tape Character Codes



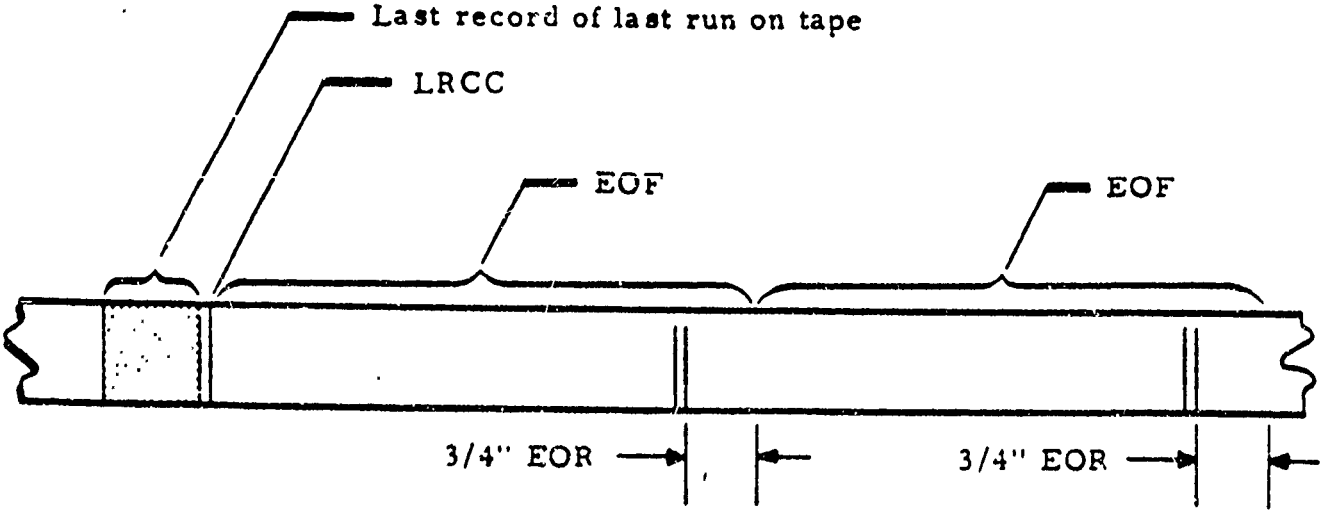


Figure C-2 Physical Characteristics of Magnetic Tape
Formats L, M, and N

APPENDIX D

D I G I T A L T A P E I N D E X

Tape Reel No.	Data Run No.	Bistatic Angle	Polarization	Roll	Pitch	Data Type	Vehicle
1	10	0°	VV	0°	0°	RCS, Glint	BQM-34F
	11	0	VV	0	0	RCS, Phase	BQM-34F
2	12	0	VH	0	0	RCS, Glint	BQM-34F
	13	0	VH	0	0	RCS, Phase	BQM-34F
3	14	0	HH	0	0	RCS, Glint	BQM-34F
	15	0	HH	0	0	RCS, Phase	BQM-34F
10	214	0	HH	90	0	RCS, Glint	BQM-34A
	215	0	HH	90	0	RCS, Phase	BQM-34A
	216	0	VH	90	0	RCS, Glint	BQM-34A
11	217	0	VH	90	0	RCS, Phase	BQM-34A
	218	0	VV	90	0	RCS, Glint	BQM-34A
	219	0	VV	90	0	RCS, Phase	BQM-34A
12	224	0	HH	0	10	RCS, Phase	BQM-34A
	225	0	HH	0	10	RCS, Glint	BQM-34A
	226	0	VH	0	10	RCS, Glint	BQM-34A
13	227	0	VH	0	10	RCS, Phase	BQM-34A
	228	0	VV	0	10	RCS, Glint	BQM-34A
	229	0	VV	0	10	RCS, Phase	BQM-34A

Tape Reel No.	Data Run No.	Bistatic Angle	Polarization	Roll	Pitch	Data Type	Vehicle
14	230	0°	HH	30°	10°	RCS, Glint	BQM-34A
	231	0	HH	30	10	RCS, Phase	BQM-34A
	232	0	VH	30	10	RCS, Glint	BQM-34A
15	233	0	VH	30	10	RCS, Phase	BQM-34A
	234	0	VV	30	10	RCS, Glint	BQM-34A
	235	0	VV	30	10	RCS, Phase	BQM-34A
16	236	0	VV	60	10	RCS, Glint	BQM-34A
	237	0	VV	60	10	RCS, Phase	BQM-34A
	238	0	VH	60	10	RCS, Glint	BQM-34A
17	239	0	VH	60	10	RCS, Phase	BQM-34A
	240	0	HH	60	10	RCS, Glint	BQM-34A
	241	0	HH	60	10	RCS, Phase	BQM-34A
18	242	0	HH	90	10	RCS, Glint	BQM-34A
	243	0	HH	90	10	RCS, Phase	BQM-34A
	244	0	VH	90	10	RCS, Glint	BQM-34A
19	245	0	VH	90	10	RCS, Phase	BQM-34A
	246	0	VV	90	10	RCS, Glint	BQM-34A
	247	0	VV	90	10	RCS, Phase	BQM-34A
20	254	0	HH	0	20	RCS, Glint	BQM-34A
	255	0	HH	0	20	RCS, Phase	BQM-34A
	256	0	VH	0	20	RCS, Glint	BQM-34A
21	257	0	VH	0	20	RCS, Phase	BQM-34A
	258	0	VV	0	20	RCS, Glint	BQM-34A
	259	0	VV	0	20	RCS, Phase	BQM-34A

Tape Reel No.	Data Run No.	Bistatic Angle	Polarization	Roll	Pitch	Data Type	Vehicle
22	260	0°	VV	30°	20°	RCS, Glint	BQM-34A
	261	0	VV	30	20	RCS, Phase	BQM-34A
	262	0	VH	30	20	RCS, Glint	BQM-34A
23	263	0	VH	30	20	RCS, Phase	BQM-34A
	264	0	HH	30	20	RCS, Glint	BQM-34A
	265	0	HH	30	20	RCS, Phase	BQM-34A
24	266	0	HH	60	20	RCS, Glint	BQM-34A
	267	0	HH	60	20	RCS, Phase	BQM-34A
	268	0	VH	60	20	RCS, Glint	BQM-34A
25	269	0	VH	60	20	RCS, Phase	BQM-34A
	270	0	VV	60	20	RCS, Glint	BQM-34A
	271	0	VV	60	20	RCS, Phase	BQM-34A
26	272	0	VV	90	20	RCS, Glint	BQM-34A
	273	0	VV	90	20	RCS, Phase	BQM-34A
	274	0	VH	90	20	RCS, Glint	BQM-34A
27	275	0	VH	90	20	RCS, Phase	BQM-34A
	276	0	HH	90	20	RCS, Glint	BQM-34A
	277	0	HH	90	20	RCS, Phase	BQM-34A
28	281	0	VV	0	30	RCS, Glint	BQM-34A
	286	0	VH	0	30	RCS, Glint	BQM-34A
	287	0	VH	0	30	RCS, Phase	BQM-34A

Tape Reel No.	Data Run No.	Bistatic Angle	Polarization	Roll	Pitch	Data Type	Vehicle
29	288	0°	HH	0°	30°	RCS, Glint	BQM-34A
	289	0	HH	0	30	RCS, Phase	BQM-34A
	290	0	VV	0	30	RCS, Phase	BQM-34A
30	299	0	HH	30	30	RCS, Glint	BQM-34A
	300	0	HH	30	30	RCS, Phase	BQM-34A
	301	0	VH	30	30	RCS, Glint	BQM-34A
31	302	0	VH	30	30	RCS, Phase	BQM-34A
	303	0	VV	30	30	RCS, Glint	BQM-34A
	304	0	VV	30	30	RCS, Phase	BQM-34A
32	313	0	HH	0	0	RCS, Glint	BQM-34A
	314	0	HH	0	0	RCS, Phase	BQM-34A
	315	0	VV	0	0	RCS, Glint	BQM-34A
33	316	0	VV	0	0	RCS, Phase	BQM-34A
	318	0	VH	0	0	RCS, Glint	BQM-34A
	319	0	VH	0	0	RCS, Phase	BQM-34A
34	16	0	HH	30	0	RCS, Glint	BQM-34F
	17	0	HH	30	0	RCS, Phase	BQM-34F
	18	0	VH	30	0	RCS, Phase	BQM-34F
35	19	0	VH	30	0	RCS, Glint	BQM-34F
	20	0	VV	30	0	RCS, Glint	BQM-34F
	21	0	VV	30	0	RCS, Phase	BQM-34F

Tape Reel No.	Data Run No.	Bistatic Angle	Polarization	Roll	Pitch	Data Type	Vehicle
36	22	0°	VV	60°	0°	RCS, Phase	BQM-34F
	23	0	VV	60	0	RCS, Glint	BQM-34F
	24	0	VH	60	0	RCS, Glint	BQM-34F
37	25	0	VH	60	0	RCS, Phase	BQM-34F
	26	0	HH	60	0	RCS, Phase	BQM-34F
	27	0	HH	60	0	RCS, Glint	BQM-34F
38	28	0	HH	90	0	RCS, Phase	BQM-34F
	29	0	HH	90	0	RCS, Glint	BQM-34F
	30	0	VH	90	0	RCS, Phase	BQM-34F
39	31	0	VH	90	0	RCS, Glint	BQM-34F
	32	0	VV	90	0	RCS, Phase	BQM-34F
	33	0	VV	90	0	RCS, Glint	BQM-34F
40	34	0	VV	0	10	RCS, Glint	BQM-34F
	35	0	VV	0	10	RCS, Phase	BQM-34F
	39	0	HH	0	10	RCS, Phase	BQM-34F
41	40	0	HH	0	10	RCS, Glint	BQM-34F
	41	0	VH	0	10	RCS, Phase	BQM-34F
	42	0	VH	0	10	RCS, Glint	BQM-34F
42	43	0	HH	30	10	RCS, Phase	BQM-34F
	44	0	HH	30	10	RCS, Glint	BQM-34F
	45	0	VV	30	10	RCS, Phase,	BQM-34F

Tape Reel No.	Data Run No.	Bistatic Angle	Polarization	Roll	Pitch	Data Type	Vehicle
43	46	0°	VV	30°	10°	RCS, Glint	BQM-34F
	47	0	VH	30	10	RCS, Phase	BQM-34F
	48	0	VH	30	10	RCS, Glint	BQM-34F
44	49	0	VV	60	10	RCS, Phase	BQM-34F
	50	0	VV	60	10	RCS, Glint	BQM-34F
	51	0	HH	60	10	RCS, Phase	BQM-34F
45	52	0	HH	60	10	RCS, Glint	BQM-34F
	53	0	VH	60	10	RCS, Phase	BQM-34F
	54	0	VH	60	10	RCS, Glint	BQM-34F
46	55	0	HH	90	10	RCS, Phase	BQM-34F
	56	0	HH	90	10	RCS, Glint	BQM-34F
	57	0	VH	90	10	RCS, Phase	BQM-34F
47	58	0	VH	90	10	RCS, Glint	BQM-34F
	59	0	VV	90	10	RCS, Phase	BQM-34F
	60	0	VV	90	10	RCS, Glint	BQM-34F
48	115	0	HH	0	20	RCS, Glint	BQM-34F
	116	0	HH	0	20	RCS, Phase	BQM-34F
	117	0	VV	0	20	RCS, Glint	BQM-34F
49	118	0	VV	0	20	RCS, Phase	BQM-34F
	119	0	VH	0	20	RCS, Glint	BQM-34F
	120	0	VH	0	20	RCS, Phase	BQM-34F

Tape Reel No.	Data Run No.	Bistatic Angle	Polarization	Roll	Pitch	Data Type	Vehicle
50	121	0°	HH	30°	20°	RCS, Glint	BQM-34F
	122	0	HH	30	20	RCS, Phase	BQM-34F
	123	0	VH	30	20	RCS, Clint	BQM-34F
51	124	0	VH	30	20	RCS, Phase	BQM-34F
	125	0	VV	30	20	RCS, Glint	BQM-34F
	126	0	VV	30	20	RCS, Phase	BQM-34F
52	144	0	VH	60	20	RCS, Phase	BQM-34F
	145	0	VH	60	20	RCS, Glint	BQM-34F
	146	0	HH	60	20	RCS, Glint	BQM-34F
53	147	0	HH	60	20	RCS, Phase	BQM-34F
	148	0	VV	60	20	RCS, Glint	BQM-34F
	149	0	VV	60	20	RCS, Phase	BQM-34F
54	150	0	HH	90	20	RCS, Glint	BQM-34F
	151	0	HH	90	20	RCS, Phase	BQM-34F
	152	0	VH	90	20	RCS, Glint	BQM-34F
55	153	0	VH	90	20	RCS, Phase	BQM-34F
	154	0	VV	90	20	RCS, Glint	BQM-34F
	155	0	VV	90	20	RCS, Phase	BQM-34F
56	159	0	HH	0	30	RCS, Glint	BQM-34F
	160	0	HH	0	30	RCS, Phase	BQM-34F
	161	0	VH	0	30	RCS, Glint	BQM-34F

Tape Reel No.	Data Run No.	Bistatic Angle	Polarization	Roll	Pitch	Data Type	Vehicle
57	162	0°	VH	0°	30°	RCS, Phase	BQM-34F
	163	0	VV	0	30	RCS, Glint	BQM-34F
	164	0	VV	0	30	RCS, Phase	BQM-34F
58	166	0	HH	60	30	RCS, Glint	BQM-34F
	167	0	HH	60	30	RCS, Phase	BQM-34F
	168	0	VH	60	30	RCS, GLint	BQM-34F
59	169	0	VH	60	30	RCS, Phase	BQM-34F
	170	0	VV	60	30	RCS, Glint	BQM-34F
	171	0	VV	60	30	RCS, Phase	BQM-34F
60	172	0	VV	90	30	RCS, Glint	BQM-34F
	173	0	VV	90	30	RCS, Phase	BQM-34F
	174	0	VH	90	30	RCS, Glint	BQM-34F
61	175	0	VH	90	30	RCS, Phase	BQM-34F
	176	0	HH	90	30	RCS, Glint	BQM-34F
	177	0	HH	90	30	RCS, Phase	BQM-34F
62	178	0	HH	30	30	RCS, Phase	BQM-34F
	179	0	HH	30	30	RCS, Glint	BQM-34F
	180	0	VH	30	30	RCS, Glint	BQM-34F
63	181	0	VH	30	30	RCS, Phase	BQM-34F
	182	0	VV	30	30	RCS, Glint	BQM-34F
	183	0	VV	30	30	RCS, Phase	BQM-34F

Tape Reel No.	Data Run No.	Bistatic Angle	Polarization	Roll	Pitch	Data Type	Vehicle
64	334	20°	VV	0°	0°	RCS	BQM-34A
	335	20	HH	0	0	RCS	BQM-34A
	336	20	VH	0	0	RCS	BQM-34A
	337	20	VV	30	0	RCS	BQM-34A
	338	20	VH	30	0	RCS	BQM-34A
	339	20	HH	30	0	RCS	BQM-34A
	344	20	VV	0	10	RCS	BQM-34A
	345	20	VH	0	10	RCS	BQM-34A
	346	20	HH	0	10	RCS	BQM-34A
	347	20	HH	30	10	RCS	BQM-34A
	348	20	VV	30	10	RCS	BQM-34A
	349	20	VH	30	10	RCS	BQM-34A
	350	20	VV	60	10	RCS	BQM-34A
	351	20	VH	60	10	RCS	BQM-34A
	352	20	HH	60	10	RCS	BQM-34A
	353	20	VV	60	0	RCS	BQM-34A
	354	20	HH	60	0	RCS	BQM-34A
	355	20	VH	60	0	RCS	BQM-34A
	356	20	VV	0	20	RCS	BQM-34A
	357	20	VH	0	20	RCS	BQM-34A
	358	20	HH	0	20	RCS	BQM-34A
	359	20	HH	30	20	RCS	BQM-34A
	360	20	VV	30	20	RCS	BQM-34A
	361	20	VH	30	20	RCS	BQM-34A
65	366	20	VV	90	0	RCS	BQM-34A
	367	20	VH	90	0	RCS	BQM-34A
	368	20	HH	90	0	RCS	BQM-34A
	372	20	HH	90	10	RCS	BQM-34A
	373	20	VH	90	10	RCS	BQM-34A

Tape Reel No.	Data Run No.	Bistatic Angle	Polarization	Roll	Pitch	Data Type	Vehicle
65	374	20°	VV	90°	10°	RCS	BQM-34A
	375	20	VV	0	30	RCS	BQM-34A
	376	20	VH	0	30	RCS	BQM-34A
	377	20	HH	0	30	RCS	BQM-34A
	381	20	VV	30	30	RCS	BQM-34A
	382	20	VH	30	30	RCS	BQM-34A
	383	20	HH	30	30	RCS	BQM-34A
	384	20	VV	60	30	RCS	BQM-34A
	385	20	VH	60	30	RCS	BQM-34A
	386	20	HH	60	30	RCS	BQM-34A
	387	20	HH	90	30	RCS	BQM-34A
	388	20	VH	90	30	RCS	BQM-34A
	389	20	VV	90	30	RCS	BQM-34A
	395	20	VV	90	20	RCS	BQM-34A
	396	20	VH	90	20	RCS	BQM-34A
	397	20	HH	90	20	RCS	BQM-34A
	402	20	HH	60	20	RCS	BQM-34A
	403	20	VH	60	20	RCS	BQM-34A
	404	20	VV	60	20	RCS	BQM-34A
66	410	20	VV	0	0	RCS	BQM-34F
	411	20	VH	0	0	RCS	BQM-34F
	412	20	HH	0	0	RCS	BQM-34F
	419	20	HH	30	0	RCS	BQM-34F
	420	20	VH	30	0	RCS	BQM-34F
	421	20	VV	30	0	RCS	BQM-34F
	423	20	VV	60	0	RCS	BQM-34F
	424	20	VH	60	0	PCS	BQM-34F
	425	20	HH	60	0	RCS	BQM-34F
	427	20	HH	90	0	RCS	BQM-34F

Tape Reel No.	Data Run No.	Bistatic Angle	Polarization	Roll	Pitch	Data Type	Vehicle
66	428	20°	VH	90°	0°	RCS	BQM-34F
	429	20	VV	90	0	RCS	BQM-34F
	430	20	VV	90	10	RCS	BQM-34F
	431	20	VH	90	10	RCS	BQM-34F
	432	20	HH	90	10	RCS	BQM-34F
	433	20	HH	60	10	RCS	BQM-34F
	434	20	VH	60	10	RCS	BQM-34F
	435	20	VV	60	10	RCS	BQM-34F
	438	20	VV	30	10	RCS	BQM-34F
	439	20	VH	30	10	RCS	BQM-34F
	440	20	HH	30	10	RCS	BQM-34F
	441	20	HH	0	10	RCS	BQM-34F
	442	20	VH	0	10	RCS	BQM-34F
	443	20	VV	0	10	RCS	BQM-34F
67	453	20	VV	0°	20°	RCS	BQM-34F
	454	20	HH	0	20	RCS	BQM-34F
	455	20	VH	0	20	RCS	BQM-34F
	457	20	VV	30	20	RCS	BQM-34F
	458	20	VH	30	20	RCS	BQM-34F
	459	20	HH	30	20	RCS	BQM-34F
	461	20	VV	60	20	RCS	BQM-34F
	462	20	VH	60	20	RCS	BQM-34F
	463	20	HH	60	20	RCS	BQM-34F
	464	20	VV	90	20	RCS	BQM-34F
	465	20	VH	90	20	RCS	BQM-34F
	466	20	HH	90	20	RCS	BQM-34F
	468	20	VV	0	30	RCS	BQM-34F
	469	20	VH	0	30	RCS	BQM-34F

Tape Reel No.	Data Run No.	Bistatic Angle	Polarization	Roll	Pitch	Data Type	Vehicle
67	470	20°	HH	0°	30°	RCS	BQM-34F
	471	20	VV	30	30	RCS	BQM-34F
	472	20	VH	30	30	RCS	BQM-34F
	473	20	HH	30	30	RCS	BQM-34F
	474	20	HH	60	30	RCS	BQM-34F
	475	20	VV	60	30	RCS	BQM-34F
	476	20	VH	60	30	RCS	BQM-34F
	479	20	VV	90	30	RCS	BQM-34F
	480	20	VH	90	30	RCS	BQM-34F
	481	20	HH	90	30	RCS	BQM-34F
68	788	1.0	HH	90	30	RCS	BQM-34F
	789	1.0	VH	90	30	RCS	BQM-34F
	790	1.0	VV	90	30	RCS	BQM-34F
	792	1.0	VV	60	30	RCS	BQM-34F
	793	1.0	VH	60	30	RCS	BQM-34F
	794	1.0	HH	60	30	RCS	BQM-34F
	795	1.0	HH	30	30	RCS	BQM-34F
	796	1.0	VH	30	30	RCS	BQM-34F
	797	1.0	VV	30	30	RCS	BQM-34F
	798	1.0	VV	0	30	RCS	BQM-34F
	799	1.0	VH	0	30	RCS	BQM-34F
	800	1.0	HH	0	30	RCS	BQM-34F
	802	1.0	HH	0	20	RCS	BQM-34F
	803	1.0	VV	0	20	RCS	BQM-34F
	804	1.0	VH	0	20	RCS	BQM-34F
	805	1.0	VV	30	20	RCS	BQM-34F
	806	1.0	VH	30	20	RCS	BQM-34F
	807	1.0	HH	30	20	RCS	BQM-34F
	808	1.0	VV	60	20	RCS	BQM-34F

Tape Reel No.	Data Run No.	Bistatic Angle	Polarization	Roll	Pitch	Data Type	Vehicle
68	809	10°	VH	60°	20°	RCS	BQM-34F
	810	10	HH	60	20	RCS	BQM-34F
	811	10	HH	90	20	RCS	BQM-34F
	812	10	VH	90	20	RCS	BQM-34F
	813	10	VV	90	20	RCS	BQM-34F
69	816	10	HH	0	10	RCS	BQM-34F
	817	10	VH	0	10	RCS	BQM-34F
	818	10	VV	0	10	RCS	BQM-34F
	819	10	VV	30	10	RCS	BQM-34F
	820	10	VH	30	10	RCS	BQM-34F
	821	10	HH	30	10	RCS	BQM-34F
	822	10	HH	60	10	RCS	BQM-34F
	823	10	VH	60	10	RCS	BQM-34F
	824	10	VV	60	10	RCS	BQM-34F
	825	10	VV	90	10	RCS	BQM-34F
	826	10	VH	90	10	RCS	BQM-34F
	827	10	HH	90	10	RCS	BQM-34F
	830	10	HH	0	0	RCS	BQM-34F
	831	10	VV	0	0	RCS	BQM-34F
	832	10	VH	0	0	RCS	BQM-34F
	833	10	VV	30	0	RCS	BQM-34F
	834	10	VH	30	0	RCS	BQM-34F
	835	10	HH	30	0	RCS	BQM-34F
	836	10	VV	60	0	RCS	BQM-34F
	837	10	HH	60	0	RCS	BQM-34F
	838	10	VH	60	0	RCS	BQM-34F
	839	10	VV	90	0	RCS	BQM-34F
	840	10	VH	90	0	RCS	BQM-34F

Tape Reel No.	Data Run No.	Bistatic Angle	Polarization	Roll	Pitch	Data Type	Vehicle
69	841	1.0°	HH	90°	0°	RCS	BQM-34F
70	844	1.0	HH	0	0	RCS	BQM-34A
	845	1.0	VV	0	0	RCS	BQM-34A
	846	1.0	VH	0	0	RCS	BQM-34A
	847	1.0	VV	30	0	RCS	BQM-34A
	848	1.0	VH	30	0	RCS	BQM-34A
	849	1.0	HH	30	0	RCS	BQM-34A
	850	1.0	VV	60	0	RCS	BQM-34A
	851	1.0	VH	60	0	RCS	BQM-34A
	852	1.0	HH	60	0	RCS	BQM-34A
	862	1.0	VV	90	0	RCS	BQM-34A
	863	1.0	VH	90	0	RCS	BQM-34A
	864	1.0	HH	90	0	RCS	BQM-34A
	865	1.0	VV	60	10	RCS	BQM-34A
	867	1.0	VH	60	10	RCS	BQM-34A
	868	1.0	HH	60	10	RCS	BQM-34A
	869	1.0	HH	30	10	RCS	BQM-34A
	870	1.0	VH	30	10	RCS	BQM-34A
	871	1.0	VV	30	10	RCS	BQM-34A
	872	1.0	VV	0	10	RCS	BQM-34A
	874	1.0	HH	0	10	RCS	BQM-34A
	875	1.0	VH	0	10	RCS	BQM-34A
	877	1.0	VV	0	20	RCS	BQM-34A
	878	1.0	VH	0	20	RCS	BQM-34A
	879	1.0	HH	0	20	RCS	BQM-34A
71	880	1.0	HH	30	20	RCS	BQM-34A
	881	1.0	VV	30	20	RCS	BQM-34A

Tape Reel No.	Data Run No.	Bistatic Angle	Polarization	Roll	Pitch	Data Type	Vehicle
71	882	10°	VV	30°	20°	RCS	BQM-34A
	883	10	VV	60	20	RCS	BQM-34A
	884	10	VH	60	20	RCS	BQM-34A
	885	10	HH	60	20	RCS	BQM-34A
	887	10	VV	90	20	RCS	BQM-34A
	888	10	VH	90	20	RCS	BQM-34A
	889	10	HH	90	20	RCS	BQM-34A
	892	10	HH	0	30	RCS	BQM-34A
	893	10	VH	0	30	RCS	BQM-34A
	894	10	VV	0	30	RCS	BQM-34A
	900	10	VH	30	30	RCS	BQM-34A
	901	10	VV	30	30	RCS	BQM-34A
	902	10	HH	30	30	RCS	BQM-34A
	903	10	HH	60	30	RCS	BQM-34A
	904	10	VV	60	30	RCS	BQM-34A
	905	10	VH	60	30	RCS	BQM-34A
	907	10	VV	90	30	RCS	BQM-34A
	908	10	VH	90	30	RCS	BQM-34A
	909	10	HH	90	30	RCS	BQM-34A
	911	10	VV	90	10	RCS	BQM-34A
	912	10	VH	90	10	RCS	BQM-34A
	913	10	HH	90	10	RCS	BQM-34A
72	925	0	VV	30	0	RCS, Glint	BQM-34A
	926	0	VV	30	0	RCS, Phase	BQM-34A
	927	0	HH	30	0	RCS, Glint	BQM-34A
73	928	0	HH	30	0	RCS, Phase	BQM-34A
	929	0	VH	30	0	RCS, Glint	BQM-34A
	930	0	VH	30	0	RCS, Phase	BQM-34A

Tape Reel No.	Data Run No.	Bistatic Angle	Polarization	Roll	Pitch	Data Type	Vehicle
74	936	0°	HH	60°	0°	RCS, Glint	BQM-34A
	937	0	HH	60	0	RCS, Phase	BQM-34A
	938	0	VH	60	0	RCS, Glint	BQM-34A
75	939	0	VH	60	0	RCS, Phase	BQM-34A
	940	0	VV	60	0	RCS, Glint	BQM-34A
	941	0	VV	60	0	RCS, Phase	BQM-34A
76	948	0	HH	60	30	RCS, Glint	BQM-34A
	949	0	HH	60	30	RCS, Phase	BQM-34A
	950	0	VH	60	30	RCS, Glint	BQM-34A
77	951	0	VH	60	30	RCS, Phase	BQM-34A
	952	0	VV	60	30	RCS, Glint	BQM-34A
	953	0	VV	60	30	RCS, Phase	BQM-34A
78	963	0	HH	90	30	RCS, Glint	BQM-34A
	964	0	HH	90	30	RCS, Phase	BQM-34A
	965	0	VH	90	30	RCS, Glint	BQM-34A
79	966	0	VH	90	30	RCS, Phase	BQM-34A
	967	0	VV	90	30	RCS, Glint	BQM-34A
	968	0	VV	90	30	RCS, Phase	BQM-34A
80	978	30	HH	90	30	RCS, Glint	BQM-34A
	979	30	VH	90	30	RCS, Glint	BQM-34A
	980	30	VV	90	30	RCS, Glint	BQM-34A
	981	30	VV	30	30	RCS, Glint	BQM-34A
	982	30	VH	30	30	RCS, Glint	BQM-34A
	983	30	HH	30	30	RCS, Glint	BQM-34A

Tape Reel No.	Data Run No.	Bistatic Angle	Polarization	Roll	Pitch	Data Type	Vehicle
80	987	30°	HH	0°	30°	RCS, Glint	BQM-34A
	988	30	VH	0	30	RCS, Glint	BQM-34A
	989	30	VV	0	30	RCS, Glint	BQM-34A
	990	30	VV	60	30	RCS, Glint	BQM-34A
	991	30	VH	60	30	RCS, Glint	BQM-34A
	992	30	HH	60	30	RCS, Glint	BQM-34A
	995	30	VV	90	10	RCS, Glint	BQM-34A
	996	30	VH	90	10	RCS, Glint	BQM-34A
	997	30	HH	90	10	RCS, Glint	BQM-34A
	998	30	HH	90	20	RCS, Glint	BQM-34A
	999	30	VH	90	20	RCS, Glint	BQM-34A
	1000	30	VV	90	20	RCS, Glint	BQM-34A
	1003	30	VV	60	20	RCS, Glint	BQM-34A
	1004	30	VH	60	20	RCS, Glint	BQM-34A
	1005	30	HH	60	20	RCS, Glint	BQM-34A
	1006	30	HH	30	20	RCS, Glint	BQM-34A
	1007	30	VH	30	20	RCS, Glint	BQM-34A
	1008	30	VV	30	20	RCS, Glint	BQM-34A
81	1009	30	VV	0	20	RCS, Glint	BQM-34A
	1010	30	VH	0	20	RCS, Glint	BQM-34A
	1011	30	HH	0	20	RCS, Glint	BQM-34A
	1012	30	HH	0	10	RCS, Glint	BQM-34A
	1013	30	VH	0	10	RCS, Glint	BQM-34A
	1014	30	VV	0	10	RCS, Glint	BQM-34A
	1015	30	VV	30	10	RCS, Glint	BQM-34A
	1016	30	VH	30	10	RCS, Glint	BQM-34A
	1017	30	HH	30	10	RCS, Glint	BQM-34A
	1018	30	HH	60	10	RCS, Glint	BQM-34A

Tape Reel No.	Data Run No.	Bistatic Angle	Polarization	Roll	Pitch	Data Type	Vehicle
81	1019	30°	VH	60°	10°	RCS, Glint	BQM-34A
	1020	30	VV	60	10	RCS, Glint	BQM-34A
	1023	30	VV	0	0	RCS, Glint	BQM-34A
	1024	30	VH	0	0	RCS, Glint	BQM-34A
	1025	30	HH	0	0	RCS, Glint	BQM-34A
	1026	30	HH	30	0	RCS, Glint	BQM-34A
	1027	30	VH	30	0	RCS, Glint	BQM-34A
	1028	30	VV	30	0	RCS, Glint	BQM-34A
	1029	30	VV	60	0	RCS, Glint	BQM-34A
	1030	30	VH	60	0	RCS, Glint	BQM-34A
	1031	30	HH	60	0	RCS, Glint	BQM-34A
	1032	30	HH	90	0	RCS, Glint	BQM-34A
	1033	30	VH	90	0	RCS, Glint	BQM-34A
	1034	30	VV	90	0	RCS, Glint	BQM-34A
82	1039	30	VV	0	0	RCS, Glint	BQM-34F
	1040	30	VH	0	0	RCS, Glint	BQM-34F
	1041	30	HH	0	0	RCS, Glint	BQM-34F
	1042	30	HH	30	0	RCS, Glint	BQM-34F
	1043	30	VH	30	0	RCS, Glint	BQM-34F
	1044	30	VV	30	0	RCS, Glint	BQM-34F
	1045	30	VV	60	0	RCS, Glint	BQM-34F
	1046	30	VH	60	0	RCS, Glint	BQM-34F
	1047	30	HH	60	0	RCS, Glint	BQM-34F
	1048	30	HH	90	0	RCS, Glint	BQM-34F
	1049	30	VH	90	0	RCS, Glint	BQM-34F
	1050	30	VV	90	0	RCS, Glint	BQM-34F
	1051	30	VV	90	10	RCS, Glint	BQM-34F
	1052	30	VH	90	10	RCS, Glint	BQM-34F

Tape Reel No.	Data Run No.	Bistatic Angle	Polarization	Roll	Pitch	Data Type	Vehicle
82	1053	30°	HH	90°	10°	RCS, Glint	BQM-34F
	1054	30	HH	60	10	RCS, Glint	BQM-34F
	1055	30	VH	60	10	RCS, Glint	BQM-34F
	1056	30	VV	60	10	RCS, Glint	BQM-34F
	1057	30	VV	30	10	RCS, Glint	BQM-34F
	1058	30	VH	30	10	RCS, Glint	BQM-34F
	1059	30	HH	30	10	RCS, Glint	BQM-34F
	1060	30	HH	0	10	RCS, Glint	BQM-34F
	1061	30	VH	0	10	RCS, Glint	BQM-34F
	1062	30	VV	0	10	RCS, Glint	BQM-34F
83	1065	30	HH	0	20	RCS, Glint	BQM-34F
	1066	30	VH	0	20	RCS, Glint	BQM-34F
	1067	30	VV	0	20	RCS, Glint	BQM-34F
	1068	30	VV	60	20	RCS, Glint	BQM-34F
	1069	30	VH	60	20	RCS, Glint	BQM-34F
	1070	30	HH	60	20	RCS, Glint	BQM-34F
	1073	30	HH	90	20	RCS, Glint	BQM-34F
	1074	30	VH	90	20	RCS, Glint	BQM-34F
	1075	30	VV	90	20	RCS, Glint	BQM-34F
	1076	30	VV	30	20	RCS, Glint	BQM-34F
	1077	30	VH	30	20	RCS, Glint	BQM-34F
	1078	30	HH	30	20	RCS, Glint	BQM-34F
	1084	30	VV	90	30	RCS, Glint	BQM-34F
	1085	30	VH	90	30	RCS, Glint	BQM-34F
	1086	30	HH	90	30	RCS, Glint	BQM-34F
	1087	30	HH	60	30	RCS, Glint	BQM-34F
	1088	30	VH	60	30	RCS, Glint	BQM-34F
	1089	30	VV	60	30	RCS, Glint	BQM-34F

Tape Reel No.	Data Run No.	Bistatic Angle	Polarization	Roll	Pitch	Data Type	Vehicle
83	1090	30°	VV	30°	30°	RCS, Glint	BQM-34F
	1091	30	VH	30	30	RCS, Glint	BQM-34F
	1092	30	HH	30	30	RCS, Glint	BQM-34F
	1093	30	HH	0	30	RCS, Glint	BQM-34F
	1094	30	VH	0	30	RCS, Glint	BQM-34F
	1095	30	VV	0	30	RCS, Glint	BQM-34F